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ABSTRACT

Descriptions of federal research for 1972 and analysis of research plans are based on the following seven major areas: (1) the developmental process, (2) effects of primary environmental influences, (3) effect of broad social programs, (4) the global approach, (5) research to benefit all children, (6) research on methodology, and (7) study of research planning and dissemination. The report covers the work of twenty federal research programs (990 research projects), with a total budget of approximately $148.4 million. Discussion of future plans indicates expected areas of major emphasis for each of the federal programs. Also described are future activities of the interagency panel, designed to further co-ordinate federal research. Document PS 006 760 provides an executive summary of the report. ED 069 372 is the 1971 Annual Report. (DP)

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TOWARD INTERAGENCY COORDINATION:

An Overview of Federal Research and Development Activities Relating to Early Childhood

Second Annual Report

Prepared for
The Interagency Panel on
Early Childhood Research and Development

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Participating Member Agencies of the Interagency Panel on Early Childhood Research and Development

- Department of Health, Education, and Welfare (DHEW)
  - Office of Child Development (OCD)
  - National Institute of Child Health and Human Development (NICHD)
  - National Institute of Mental Health (NIMH)
  - National Institute of Neurological Diseases and Stroke (NINDS)
  - Maternal and Child Health Service (MCHS)
  - Social and Rehabilitation Service (SRS)
  - Office of Education (OE)
    - Bureau of Education for the Handicapped (BEH)
    - Bureau of Elementary and Secondary Education, Follow Through Programs (BESE)
    - National Center for the Improvement of Educational Systems (NCIES)
  - Office of the Assistant Secretary for Planning and Evaluation (OASPE)
  - National Institute of Education (NIE)
- Office of Economic Opportunity (OEO)
- Department of Agriculture (USDA)
- Department of Housing and Urban Development (HUD)
- Department of Labor (DOL)

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INTRODUCTION

In recent years there has been a growing awareness that the quality of life experienced by America's children in their earliest years affects their later development and subsequently the future character of the nation. Such awareness has been responded to in the Federal government by an increasing focus on research and action programs centered around young children, particularly those in the most disadvantaged groups.

Where has this focus led us? Is there any pattern or design in Federally funded research in early childhood learning and development? What do we know about young children as a result of Federal research activity? What do we need to know and where should future Federal funding be focused?

These inquiries came from the President and from the Office of Budget and Management. They are important inquiries that needed responses from those people in the Federal government who were best informed and who were professionally involved in the research activities of various Federal agencies.

To respond to these inquiries, the Office of Child Development convened an interagency group in the spring of 1970 which was made up of professional representatives from those parts of the government that have a major interest in early childhood growth and well-being. This Interagency Panel on Early Childhood Research and Development has met regularly since then and set itself a number of tasks intended to provide satisfactory responses to the questions about the merits and future direction of Federal research. In the fall of 1971, an Information Secretariat was established within the Office of Child Development to assist the Panel in accomplishing its objectives.

From the Panel's inception, its members began to collect information on the early childhood research being conducted and planned by their respective agencies. In FY '72, this activity was expanded and a computer-based information system is now available to provide descriptions of present early childhood research funded by the participating agencies. From this computer system came much of the data for this report. The computer-coded information is also made available to the participating agencies and their Regional Offices upon request.

One of the major Panel uses of the research information system is the preparation of an annual report to assist the agencies in the yearly planning and coordination of Federal early childhood research efforts. Research activities for fiscal year 1971, as well as tentatively planned research for 1973, were described in the Panel's 1971 annual report entitled Toward Interagency Coordination: An Overview of Federal Research and Development Activities Relating to Early Childhood and Recommendations for the Future (Stearns, Searcy and Rosenfeld, 1971). This, the Panel's second annual report, has the following objectives: 1) to review the priority needs in early childhood research; 2) to compare current research activities, i.e., fiscal year 1972 expenditures, with the recommended priority areas; 3) to present and analyze revised research plans for FY 1973 and the forward plans for fiscal years 1974-78; and 4) to describe planned activities of the Panel as it continues to explore ways to bring about greater coordination of research efforts.

In addition to collecting research information for a computerized data system and reporting on research activities and plans, the Panel produced in FY '72, a number of state-of-the-art papers which are intended to provide needed information in areas requiring investigation (See Bibliography.) A summary of these publications, and the major recommendations of each, is presented in Appendix A.*

Also, in the fall of 1972, the membership of the Panel was broadened to include the Department of Labor, the Department of Housing and Urban Development, the Department of Agriculture, the National Institute of Neurological Diseases and Stroke, and the newly formed National Institute of Education. The research plans of the Department of Agriculture, the National Institute of Education, and the National Institute of Neurological Diseases and Stroke are discussed in the chapter on future planning. Descriptions of ongoing research activities for all new member agencies will be included in the Panel's report for FY '73. (Information for the current NINDS effort is included in this report.) In addition to the new agencies, several important research programs of agencies which were already members were included in the information system this year, and these are described in the following pages. The Interagency Panel continues to explore ways to facilitate the coordination of planning and funding of early childhood research in the Federal agencies.

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*See Appendix D for a listing of all the Panel's documents, which include papers in addition to the state-of-the-art studies that were used as references for this report and that appear in the Bibliography.

CHAPTER I

EARLY CHILDHOOD RESEARCH NEEDS AND THE ANALYSIS OF FY 72 RESEARCH

As the first step in analyzing the content and direction of early childhood research conducted in fiscal year 1972, this document reviews that section of last year's annual report which describes the major research areas and questions needing investigation, as specified by the Interagency Panel. The major documents used to update the description of research needs were the agency plans for future research submitted by the Panel members, and the state-of-the-art papers prepared for the Panel in key research areas. An examination of these documents indicates that substantial progress is being made in addressing the identified areas of research need.

Current research is analyzed and discussed here within the same broad framework used for last year's annual report. The major areas of concern fall into three main groups: the processes of child development; the effects of various aspects of the primary environment on this development; and the results of other kinds of environmental influences, particularly, the effects of various social intervention programs.

Certain fundamental "approaches" to child development research, recommended in last year's report also are retained. These include the need for research which will benefit all children, holistically-oriented research, long-term research, and studies to improve the research process itself, i.e., studies on methodology, planning, and dissemination of research results.

Within this basic structure, two major topics are presented in this chapter: 1) the review of research needs and 2) the analysis of FY '72 research projects. The discussion in the following chapter on the plans of the Federal agencies for fiscal year 1973 and forward planning for years 1974-1978 also follows this basic organization.

Section 1: Major Areas of Research Need

Listed below are the major research areas recommended by the Interagency Panel as needing strong support. The discussion in this section and that to come follow this outline.*

I. The Developmental Process
II. The Effect of Primary Environmental Influences
III. The Effect of Broad Social Programs
IV. The Global Approach
V. Research to Benefit All Children
VI. Research on Methodology
VII. Study of Research Planning and Dissemination
VIII. Long-Term Research

The Developmental Process

Research concerns on the processes of child development continue to utilize the traditional pattern of focusing on the cognitive, the social-emotional, and the physical processes. The Panel recommends that what is needed is more research which clarifies the interrelationships of these major aspects of development and their meaning for child growth. In terms

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*The expansion and explication of these terms as they were used for the detailed analysis of research ongoing in FY '72 appear starting on page 20.

of specific research questions, in development of interrelationships, a number of research problems on individual processes are offered: (1) how children come to generalize their cognitive knowledge and abilities and apply them in new situations or in learning new skills, (2) the way a child's self-image develops and particularly the sense of confidence and self-worth necessary for him to function effectively in a variety of social situations, and (3) the effects of maternal and child nutrition on pre- and post-natal development, as well as the preventive and therapeutic effects of nutritional supplementation. A striking need is seen for research aimed at preventing different kinds of abnormal development. For example, a better understanding is wanting of the "biology of learning," which is concerned with the physiological, biochemical and genetic factors that underlie learning ability. Basic investigations in this area already have been useful in preventing and treating certain types of mental retardation. The Panel urges more research on the origins of emotional illness in children and on therapy techniques which can be used with very young children, in order to prevent emotional disturbance from starting or from developing into serious psychoses. Another critical problem area concerns the causes and prevention of premature birth and birth defects, both of which often correlate with retarded physical and mental development. The examples concerned with the prevention of abnormality illustrate the need for research that looks at the relatedness of all aspects of the child's development.

A special Panel report describing the problems and issues in socialization research deals directly with important aspects of social-emotional development. The first part of the report, which is concerned with the development, determinants and modification of group attitudes and behavior recommends, for example, a re-examination of the issue of whether or not prejudice is learned or based on some innate human tendency (Sowder and Lazar, 1972). Another recommended area of study is the delineation of different types of personalities that exist among various ethnic and social class groups and the types of intervention that will bring about positive inter- and intra-group attitudinal and behavioral changes in individuals with different personality structures. The report covers in detail social development problems needing study that are characteristic of children of different ethnic and cultural backgrounds. (Each of the Panel's special reports cited in the following pages is summarized in Appendix A. These summaries include specific recommendations for future research in the subject area of concern.)

As pointed out in last year's report, the great need in research focused on the development of the child is that which looks at the child as a total entity, as a being whose various systems react as a whole to stimuli from within and without. The question of research which looks at the child as a whole person is discussed in greater detail below.

Primary Environmental Influences

Research on primary environmental influences deals with those influences "closest" to the child, whether the source is natural or experimental. These include the influences of the physical surroundings, for example, of home, hospital, neighborhood or school, and the effects of the family, parents, siblings, peers and other adults in the community. The research needs include consideration of the ways in which different aspects and combinations of these various influences affect the child in whole or in part.

Much more research is needed which considers the combined effects on the child of the local environments within which he moves (that is, the effect of the interrelatedness of all the factors in a particular set of surroundings).

The family as the most significant primary source of influence on the child has been a focus of special concern by the Interagency Panel. For example, last year's annual report stressed the need to study the changing role of the family in United States society, as this affects developing children. The study of the potentially beneficial and harmful effects of a variety of alternative family arrangements was suggested as a significant area for future research.

With regard to "school" research, a comprehensive investigation is needed of the formal educatonal system to determine how it may be combined with special programs to meet the needs of different groups of children (such as the handicapped, deprived or retarded child) or to satisfy individual differences in learning style and personality. These special programs may be more informal arrangements in the school itself or located in the community or in the learner's home. Parent education to help parents assist in their children's learning is an area requiring increased research attention.

A special report on programs to develop parenting skills was published under Panel auspices (Lazar and Chapman, 1972). The report illustrates concern with the need to make it possible for mothers and fathers to become more effective agents in their children's growth and happiness. Various types of parent education programs are examined and a number of research questions posed for each type. The report points out the particular need for comparison studies of the different methods of educating parents, especially between group and individual parent education approaches and between those programs that provide services and those that use parents as staff.

Broad Social Programs

Many of the social intervention programs, around which a great deal of Federal research is centered, do, in fact, deal with a variety of the primary influences named above. Such program research is often planned at the Federal level and designed to determine the effects and value of a variety of Federally or locally sponsored programs whose purpose is to improve the opportunities and well-being of children. Some examples of such intervention programs are day care and preschool education programs, compensatory education, child advocacy, and a variety of health care programs. Programs such as these involve and frequently depend heavily upon local community participation. Other programs, which affect children more indirectly, may require a broader and different kind of support. Examples of broader kinds of social intervention programs are those concerned with the influence of housing location and income maintenance on families and children.

In special state-of-the-art documents, the Panel reviewed two of these areas in detail. One revolves around the primary area of day care, the other around the broader social area of income support. The day care report reviews a range of research needs pertaining to the growth and development of children, as well as the present situation in day care delivery systems (Chapman and Lazar, 1971). Another section of the day care report on priority research strategies includes the following interrelated specific research recommendations: (1) basic research should include projects that will provide information on the whole child, the life space of the child, and the longitudinal aspects of child development; (2) methodological research is needed which studies ways of identifying problems, formulating hypotheses, gathering data, developing measurement instruments and analyzing research findings. Several methodological questions are raised, such as: "What research designs or methodologies can include all the factors impinging on the child to determine sources of impact on his development?"; "Under what arrangements can interdisciplinary research designs and methodologies be developed?"; and, "How can parents and other affected groups be involved in research designs and methodologies?" These are only examples of many concrete recommendations made in the day care report.

After reviewing some prevalent family support mechanisms such as Social Security, job training programs and income maintenance experiments, the income support review (found in the second section of the report on socialization) recommends a number of areas in need of investigation (Sowder and Lazar, 1972). One large concern focuses around the need to compare various sources of support to determine their consequences for such factors as the recipients' self-esteem and sense of dependency, and the behavioral outcomes for children of families receiving one kind of support or another. A more specific example is the recommendation for large-scale, long-term studies to measure the impact of various sources of income support on fertility rates, as well as the effect of family size on marital stability, family functioning and children's behavior.

Another area of intervention which needs a great deal of study to determine its best application is educational technology. This is a discipline which frequently uses hardware such as television equipment and computers as means of accomplishing operationally stated objectives in a system of instruction. The impact of such media as television will continue to spread, and research on its effects and effectiveness will be crucial in the next few years. Federally supported research efforts in this area are attempting to involve parents and local community groups in the design and conduct of the research. A significant research question in educational technology is how to use its methods and media to make available individualized instruction when it is appropriate. The subject of individualized instruction was suggested last year by the Panel as one deserving additional study.

A Panel document on the status of television research describes a variety of questions which are in need of answers (Searcy and Chapman, 1972). These include issues related to the content, programming and presentation of TV material, the development of TV programs, technical problems related to transmittal systems, and the effects of the "how, when and why" of TV watching on various subpopulations. A specific recommendation is made for interdisciplinary research to determine the effects of television on the cognitive, the social-emotional and the physical aspects of development, both separately and in their total effect.

The Global Approach

The need for holistically-oriented research has been mentioned above in the context of a number of the research areas discussed. Information on one part of the developmental process or on only one kind of intervention, at some point, must be put in the perspective of its relationship with findings about other aspects and influences. The special report prepared by the Panel on overall research needs and imbalances stresses the need for ecological studies (Chapman, 1972). It indicates the need to consider the effects on the whole child of his interaction with the surrounding environment, both with the natural environment and with applied intervention programs. The special research reports, without exception, stressed the importance of a holistic approach to determine the effects on the total child of combinations of influences.

Many of the above-mentioned social programs at the primary level attempt to provide a variety of services or program components which will meet a diversity of children's needs. Thus, research on these comprehensive service programs may begin to approach the holistically-oriented research for which there is such a vital need. This is seen in the recommendations discussed above in the day care area. With regard to the broader social programs, the first steps have yet to be taken in research to determine the effects of various combinations of such programs on the welfare of families and children. It is pointed out in the report dealing with income support that studies comparing different kinds of support programs are still in the recommendation stage. Studies concerned with combinations of the broad programs such as day care and income support have yet to be carried out. Research studying the effects on the whole child of impinging forces in his life space is also in its initial stages.

Research to Benefit All Children

Research relating both to broader programs and to intervention at the primary level often is aimed at providing an objective basis for social policy decisions. To date, most of the emphasis has been on developing and determining the effects of programs for the economically disadvantaged and otherwise handicapped children whom they are intended to benefit. Thus, with regard to social intervention programs, as well as studies of primary influences, researchers need to devote more attention to assessing the effects of environmental influences and programs upon all children. In addition to the poor and the handicapped, others such as the gifted and the economically advantaged child, and all culturally diverse children should be able to benefit from Federally sponsored research. This may mean developing or revising programs for a broader sample of children, or determining the effects of present programs on more diverse groups.

The Panel report on the status of longitudinal research points out that there is a "general lack of long-range descriptive studies which follow the natural development of children prenatally through maturity." (Lazar, 1972). New long-term studies are recommended which are based on a national representative sample of children.

There is also a need for more research on the ways in which diverse groups of children may achieve harmonious relationships when brought together in our various social institutions. As pointed out in the report on socialization issues, ethnic and social class prejudice adversely affect children and exert a divisive influence on society as a whole. New studies are needed on a host of the factors correlated with prejudice if we are to learn how all our children may benefit from the strengths that are inherent in a truly pluralistic society.

Research on Methodology

Better ways of designing and evaluating research itself need to be developed; that is, methodological studies need more support. Needed are better methods of conducting basic research and the variety of research efforts which fall under the category of applied research. The methodology of research evaluation also represents an area needing additional study. Of particular importance are methodological studies to make more effective the long-term research called for by the Panel.

Two specific areas of concern center around the need to develop better behavioral observation techniques and good methods of measuring the cause-effect relationships of specific variables (inputs) and specific results (outcomes). More attention needs to be given to causal rather than correlational studies so that solutions and answers may be more readily identified. Being able to link cause with result makes it possible to replicate successful programs, thus capitalizing on the benefits of research. More detailed examples of needed methodological research are given above under Broad Social Programs.

Study of Research Planning and Dissemination

Research planning. In order for holistically-oriented and long-term Federal research to be optimally successful, research across agencies must be cooperative and coordinated. Coordination can be accomplished only through systematic research planning. Such planning, now being initiated by the Interagency Panel, requires the establishment of research goals and the procedures for reaching goals. The establishment of an information base was one of the first essential steps taken toward systematic research planning. It also will assist in establishing goals and planning procedures. Since the need for interdisciplinary research is mentioned in several of the Panel's special reports, steps taken to improve coordination through planning become especially important.

Dissemination of research results. If the first step in the research process is research planning, then the last is the effective dissemination of information about research findings, and their subsequent useful application for eventual or immediate benefit of children. Studies are needed which suggest better ways of disseminating research information to a variety of users. Especially important are replications of successful models developed by researchers so that the broadest implementation of research findings may occur.

The Panel's day care report cites specific examples of the kinds of dissemination needed. These recommendations for dissemination include the development of systems appropriate to local communities that will permit them to match available day care vacancies in center and family day care homes with parents who are seeking these services; comparisons between various approaches for disseminating information about day care models; ways of making existing information available in useful forms for paraprofessionals; ways of gathering information for dissemination; and the further development of strategies to communicate basic and applied research information to other researchers.

Long-Term Research

The tendency on the part of the Federal government has been to support relatively short-term and piecemeal research efforts, both in research focused on the developmental process itself and on the conditions which influence that process. As a result, less benefit is realized from invested research dollars than might have been the case if promising research had received support for as long as the evidence suggested a continuation would be productive. The reason that long-range support of good research is necessary is that the effects on children over time may be the only reliable way to determine the real effects of influences from the natural environment and of many of the primary and broader scale interventions. In its report last year, the Panel stressed the importance of conducting long-range descriptive studies of the developmental processes, along with studies to show the long-term effects of a variety of interventions.

The carrying out of longitudinal research presents both practical and methodological problems. Some of the former that need to be better understood are: (1) the shifts in financial support that occur as Federal social policy interests change; and (2) the urgency to produce immediate and tangible results from the investment of research dollars.

Among the major methodological problems are those associated with the attrition of the research sample over long periods of time, the shift in focus that may come as a principal investigator leaves a project before it is completed, the revision and development of new research instruments as years pass, and problems associated with massive data collection and analysis. These and other problems are discussed in detail in the Panel's statement and working paper on longitudinal research (Grotberg and Searcy, 1972). This document was prepared to help support the Panel's recommendation that long-term research be considered a priority concern in future research planning by the Federal agencies.

Section 2: Description and Analysis of FY '72 Research, by Agency and across Agencies

This section first describes the research of individual agencies which, in the case of the Office of Education, includes a number of research programs with different orientations or "missions." Following these descriptions of the research comes the analysis, first of individual agency research, and then of the research of all the agencies. The latter is presented as a summary statement which points out those research areas which the data suggest may need expanded support from Federal agencies.

The criterion used to determine areas of strength and need is the statement of recommendations for early childhood research made by the Interagency Panel, which was reviewed in the preceding section. These are listed below as "categories used for the analysis." It must be kept in mind that this is not an exhaustive list of possible important research areas in early childhood, but represents areas of current significance selected by the Panel.

Interpreting the Data

For the purposes of the analysis, data was collected at the project level of research. Money to carry out research projects is made available to investigators on a grant or contract basis. Some are very large grants or contracts (more than $1 million) and some are small, as small as $10,000 or less. Thus, an analysis based on number of projects must also take into consideration the amount of total agency funding. A case in point is that of NCERD which reported 47 projects and a funding total of $18 million, while NIMH had a total of 103 projects but a budget of

$6.4 million. Also, in making comparisons between agencies, it should be remembered that percentage figures are meaningful only when the total number of projects of each agency is kept in mind. Only three of the seven SRS projects are concerned with life space studies, for example, but this represents 43 percent of the total work reported. In OCD, on the other hand, 23 life space studies count only as 18 percent of the total.

It is extremely important when examining the tables and reading the analysis to remember that the data for the categories used are generally overlapping. That is, the percentages shown do not designate mutually exclusive research areas in any one area or kind of research category. That is why the total for any agency may equal more than 100 percent. What the percentages mean, for example, is that 27 percent of the total number of projects for a particular agency includes research, say, on cognitive development. Those same projects or some of them may also include research on the family, on the disadvantaged child, and on child care, or almost any other category used in the analysis. In the discussion of amount of money spent in any one area, the same concept applies. If a $20 million total is spent on dissemination of information, some part or all of the same dollars may also support health services research. Whenever categories are not mutually exclusive, it will be so stated.

As to coverage, information on new programs included in the fiscal year 1972 data base comes from the Division of Bilingual Education, the National Center for Educational Technology, the Right to Read program, the Office of Program Planning and Evaluation, and the National Center for Educational Communication, which are all OE programs, plus the National Institute of Neurological Diseases and Stroke. Each of these programs is discussed individually and also included in the analysis of the overall research picture. In addition, information on the intramural research of NICHD and NIMH was added to the data base for FY '72. Since the collected data on intramural research represents a relatively small amount of the total research picture, it is not treated individually, but is included in the discussion of the overall Federal effort. Information from the National Center for Educational Statistics (OE) is also included in the comprehensive view. All the new agencies which joined the Panel this year (see Introduction) and the new programs added for old agencies, will receive detailed coverage in next year's annual report. All the agencies and programs included for FY '72 are listed below with the total funding amounts on page 23.

Finally, the data included in this report covers information as it was available from the agencies on September 30, 1972. This means that any additional funding, or any changes made in the funding, or any projects designated as early childhood research since that time are not included here. No research on animals is included and early childhood is defined as including ages zero through eight. For projects which include children beyond age eight, the agencies were asked to estimate the amount of funding that supported research only for the zero through eight age group. When this was not possible, the amount for the total project was included. Thus, the figures given in the following analysis on early childhood research, FY '72, represent the effort as reported by the individual agencies of the Interagency Panel.

Categories Used for Analysis

Taken from the description of research needs in Section 1 above, the following outlined list represents the priority areas that were selected as the basis for the analysis of FY '72 Federally funded research. The list covers the same basic ground as the areas cited at the beginning of this chapter, but is expanded into selected sub-areas and explains the meaning of various terms as they are used in the discussion to follow.*

I. Developmental Process--includes the following main aspects:

Cognitive Development--includes learning abilities, concept formation, basic process skills and communication skills;

Social-emotional Development--includes affective development and various aspects of socialization;

Physical Development--includes motor and psychomotor growth, as well as sensory and perceptual development.

II. Primary Environmental Influences--includes the effects on development of family, home, and neighborhood, i.e., the effect of immediate physical surroundings, and the influence of adults and children present in these surroundings.

Parent Education--covers studies in which special attention is given to the effects of parent training on child development.

Health and Welfare Services Research--includes research on health programs and development and delivery of services to foster, adopted and other vulnerable children. Does not include research on mentally handicapped children.

III. Broad Social Programs--covers planned intervention programs, frequently carried out at the local level, but broad enough in scope and effect to include a variety of health, education and welfare objectives. Three examples are child care, child advocacy, and educational technology.

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*For further detail on the content coverage of these areas, see Early Childhood Research Classification. Interagency Panel on Early Childhood R & D, August 1, 1972.

Child Care--covers comprehensive child development programs, early education programs, and day care programs;

Child Advocacy--covers studies concerned with the organized support of the right of children to receive services which contribute to their overall development and well-being;

Educational Technology--projects which study the systematic use of television, computers, and other kinds of "hardware" (as well as other materials) for transmitting various kinds of information. A frequent objective of educational technology systems is to individualize instruction;

Community Involvement--covers studies in which community participation, by individual persons or agencies, is an important element in the conduct and success of a planned intervention program.

IV. Global Approach--includes research which produces information about the whole child as he exists in his total life space. The studies included in this category may achieve this objective directly or indirectly and may cover only certain aspects of the total picture.

Child as a Whole Person--research which looks at the child as a total reactive entity or which attempts to integrate information about the development of the total child;

Developmental Processes--research which considers all three of the developmental processes in one study: cognitive, social-emotional, and physical;*

Life Space--studies in which the focus is on the interrelatedness of all factors in a specific environment and their combined effect on children.

V. Research to Benefit All Children--includes the following categories:

Disadvantaged Children--covers children from low income families, i.e., socioeconomically disadvantaged children;

Handicapped Children--covers children with a variety of physical, intellectual and social-emotional handicaps, including the mentally ill child;

Other Children--covers those children not indicated to be members of the above two groups.

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*Research which includes two processes in one study, i.e., cognitive and social-emotional development, are tabulated also.

VI. Research Methodology--research which has the primary objective of finding better ways of conducting and evaluating research efforts; includes the development of test instruments for a variety of content areas and subject populations.

VII. Research on Planning and Dissemination

Research Planning--considers the best methods of planning for research, including studies to assist in setting research goals and the development of appropriate data bases for planning;

Research Dissemination--includes studies of the most effective ways of informing researchers and others of the results of completed research, as well as information about research which is ongoing.

Kinds of Research--These categories are included in the analyses of FY '72 data but not in the discussion of agency plans in the next chapter.

1. Basic Research--that research directed primarily toward the increase of knowledge, the improvement of understanding, and the discovery of basic relationships; not necessarily applicable to solutions of immediate problems.

2. Applied Research--Results are intended to be more directly applicable to immediate problems than basic research findings; applied research may be derived from basic research or theory or may be empirical; it is aimed at showing how existing knowledge can be used in new and useful ways. In the overall analysis, applied research is considered as a category unto itself, as well as covering the following kinds of research:

Development--concerned with the construction of tests, systems, materials, methods, media, equipment, facilities, and prototypes to provide for instrumentation of either basic or applied research;

Pilot Studies--small scale initial trials to determine the feasibility of conducting larger efforts, including the identification of possible problems;

Demonstrations and/or Replications--activities designed specifically to show the method of operation or applicability of a research or program model.

3. Evaluations--includes studies to assess overall project impact; to compare various models, strategies or materials; and to determine the cost-effectiveness of planned programs.

4. Long-Term Research--research on the same individuals or groups with similar characteristics to determine the effects over time of natural events or planned interventions.

Descriptions of FY '72 Agency Research Programs

The FY '72 early childhood research analysis covers research reported by 20 Federal research programs, sponsored by nine Federal agencies. Data from some 990 individual projects, with a total budget of approximately $148.4 million, was collected and analyzed as a basis for the descriptions to follow. The next several pages contain detailed descriptions of the research of 17 agency research programs. The last three in the following list are included in the analysis of overall cross-agency research.

Programs and Funding in Federal Early Childhood Research by Agency, FY '72

		No. Projects	Millions
1.	Office of Child Development (OCD)	126	12.5
2.	National Institute of Child Health and Human Development (NICHD)	146	9.9
3.	National Institute of Neurological Diseases and Stroke (NINDS)	1	5.5
4.	National Institute of Mental Health (NIMH)	103	6.4
5.	Maternal and Child Health Service (MCHS)	40	3.0
6.	Social and Rehabilitation Service (SRS)	7	1.0
7.	OE, Bureau for the Education of the Handicapped (BEH)	207	21.4
8.	OE, National Center for Educational Research and Development (NCERD)	47	18.0
9.	OE, Follow-Through Program	29	10.7
10.	OE, Division of Bilingual Education	180	30.7
11.	OE, National Center for Educational Television (NCET)	6	8.7
12.	OE, National Center for Educational Communication (NCEC)	8	$530,528 (exact figure)
13.	OE, Right to Read Program	1	12.0
14.	OE, National Center for the Improvement of Educational Systems (NCIES)	35	4.4

		No. Projects	Millions
15.	OE, Office of Program Planning and Evaluation (OPPE)	6	1.8
16.	Office of the Assistant Secretary for Planning and Evaluation (OASPE)	5	$361,200 (exact figure)
17.	Office of Economic Opportunity (OEO)	3	1.4
18.	OE, National Center for Educational Statistics (NCES)	2	$130,000 (exact figure)
19.	NICHD, Intramural Research	13	$247,000 (exact figure)
20.	NIMH, Intramural Research	23	(Funding figures not available)

Office of Child Development,
Office of the Secretary, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $12.5 million

- Number of Programs or Projects Active in FY '72: 126

- Mission and/or Functions in Early Childhood Research:

OCD has broad administrative and coordinating functions to develop priorities and strategies for early childhood research throughout DHEW. Research emphasis in OCD is focused in several areas affecting the development of the child. The health, education and welfare of children are all of concern, with studies concentrating on how various programs and environmental influences in these areas affect child development. In FY '70 and '71, study was concentrated on child and day care services for children ages 0-5. In FY '72, OCD expanded its scope to include more research on the family and the community and on children with special needs.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*

- Health and/or welfare services
- Child advocacy
- Whole child
- Physical, cognitive, social-emotional development
- Handicapped children
- Individualized instruction
- T.V. instruction
- Computer-assisted instruction
- Planning

16% - 39%

- Physical development
- Cognitive development
- Social-emotional development
- Parent training
- Community involvement
- Life space
- Cognitive and social-emotional development
- Methodology
- Dissemination

40% or above

- Family-related
- Child care and/or preschool education
- Disadvantaged children
- Other children (not handicapped or disadvantaged)

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*When no research was reported within a category, the name was not included.

Office of Child Development,
Office of the Secretary, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72*:
(Categories are not mutually exclusive.)

Basic Research	18.1%
Applied Research	6.3%
Development	20.5%
Demonstration	21.3%
Evaluation	22.0%
Long-term Studies (longer than one year)	18.9%

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*The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

National Institute of Child Health and Human Development,
National Institutes of Health, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $9.9 million

- Number of Programs or Projects Active in FY '72: 146

- Mission and/or Functions in Early Childhood Research:

The main objective of NICHD is to support research in the basic processes of human development, including the biomedical processes, as well as those involved in social and behavioral development. Three main areas of investigation relate to early childhood: growth and development, mental retardation, and perinatal biology and infant mortality. Within these areas, studies range from investigations to develop new personality measurement approaches, to research on environmental impact on cognitive development, to study of the effect of diet on body composition.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*

- Family related
- Parent training
- Health and/or welfare services
- Child care and/or preschool education
- Community involvement
- Whole child
- Physical, cognitive, and social-emotional development
- Life space
- Cognitive and social-emotional development
- Disadvantaged children
- Planning
- Dissemination

16% - 39%

- Cognitive development
- Social-emotional development
- Handicapped children
- Methodology

40% or above

- Physical development
- Other children (not handicapped or disadvantaged)

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*When no research was reported within a category, the name was not included.

National Institute of Child Health and Human Development,
National Institutes of Health, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72[*]:
  (Categories are not mutually exclusive.)

Basic Research	95.2%
Applied Research	0%
Development	2.7%
Demonstration	0%
Evaluation	0%
Long-term Studies (longer than one year)	26.7%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

National Institute of Neurological Diseases and Stroke,
National Institutes of Health, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: Collaborative Perinatal Project, $5.5 million

- Number of Programs or Projects Active in FY '72: 1

- Mission and/or Functions in Early Childhood Research:

  The Collaborative Perinatal Project is a comprehensive, prospective investigation of women during their pregnancies and the subsequent development of the children born of these pregnancies. Monitored and recorded are the events and complications of pregnancy, labor and delivery which may contribute to a variety of neurological disorders. Data has been collected at 14 major medical centers over a period of years and will be subjected to intensive analysis.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*	16% - 39%	40% or above
		Family-related
		Whole child
		Physical, cognitive social-emotional development
		Disadvantaged children
		Handicapped children
		Other children (not handicapped or disadvantaged)
		Methodology

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*When no research was reported within a category, the name was not included.

National Institute of Neurological Diseases and Stroke,
National Institutes of Health, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72:
  (Categories are not mutually exclusive.)

Basic Research	100.0%
Applied Research	0%
Development	0%
Demonstration	0%
Evaluation	0%
Long-term Studies (longer than one year)	100.0%

National Institute of Mental Health,
Health Services and Mental Health Administration, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $6.4 million

- Number of Programs or Projects Active in FY '72: 103

- Mission and/or Functions in Early Childhood Research:

The promotion of child mental health is the overriding concern in the NIMH research program. Areas of investigation are varied, spanning a continuum from the investigation of basic cognitive, personality and socialization processes, through the development of research methodologies, to study of intervention programs and other environmental influences which may affect the healthy emotional and cognitive growth of all children.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*

Physical development
Parent training
Health and/or welfare services
Child care and/or preschool education
Child advocacy
Community involvement
Whole child
Physical, cognitive, and social-emotional development
Life space
Cognitive and social-emotional development
Disadvantaged children
Methodology
Planning
Dissemination
T.V. instruction

16% - 39%

Handicapped children
Family-related

40% or above

Cognitive development
Social-emotional development
Other children (not handicapped or disadvantaged)

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*When no research was reported within a category, the name was not included.

National Institute of Mental Health,
Health Services and Mental Health Administration, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72[*]:
  (Categories are not mutually exclusive.)

Basic Research	81.6%
Applied Research	7.8%
Development	3.9%
Demonstration	0%
Evaluation	2.9%
Long-term Studies (longer than one year)	17.5%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

Maternal and Child Health Service,
Health Services and Mental Health Administration, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $3.0 million

- Number of Programs or Projects Active in FY '72: 40

- Mission and/or Functions in Early Childhood Research:

The major research objective of MCHS is to improve the health of mothers and children through increasing the effectiveness of health and crippled children's services. Major areas of investigation include the improvement of child health programs, maternity health services, nutritional status, prevalence of handicapping conditions, utilization of paraprofessionals, health delivery systems and evaluation methodology. Support is not available for basic research; the focus is on applied research and evaluation of delivery systems.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*

Family-related
Parent training
Child advocacy
Community involvement
Whole child
Physical, cognitive, social-emotional development
Cognitive and social-emotional development
Disadvantaged children
Methodology
Planning
Individualized instruction

16% - 39%

Physical development
Cognitive development
Social-emotional development
Child care and/or preschool education
Handicapped children
Dissemination

40% or above

Health and/or welfare services
Other children (not handicapped or disadvantaged)

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*When no research was reported within a category, the name was not included.

Maternal and Child Health Service,
Health Services and Mental Health Administration, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72*:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	46.0%
Development	17.5%
Demonstration	7.5%
Evaluation	20.0%
Long-term Studies (longer than one year)	42.5%

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*The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

Community Services Administration
Social and Rehabilitation Service, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $1.0 million

- Number of Programs or Projects Active in FY '72: 7

- Mission and/or Functions in Early Childhood Research:

The SRS program has been planned to improve the status and well-being of children through research which will contribute to the advancement of child welfare. Research is conducted in such areas as protective services for neglected and abused children, adoption, foster care, services for mentally retarded children and day care services.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*	16% - 39%	40% or above
Cognitive development	Child care and/or preschool education	Family-related
Social-emotional development	Disadvantaged children	Health and/or welfare services
Parent training	Handicapped children	Other children (not handicapped or disadvantaged)
Community involvement	Life space	Methodology

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*When no research was reported within a category, the name was not included.

Community Services Administration,
Social and Rehabilitation Service, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72[*]:
(Categories are not mutually exclusive.)

Basic Research	28.6%
Applied Research	14.3%
Development	14.3%
Demonstration	28.6%
Evaluation	14.3%
Long-term Studies (longer than one year)	57.1%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

Bureau for the Education of the Handicapped,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $21.4 million[*]

- Number of Programs or Projects Active in FY '72: 207

- Mission and/or Functions in Early Childhood Research:

BEH research is primarily of a development and demonstration nature. A number of such programs provide in effect a range of educational and other services to handicapped children and their parents or to organizations serving handicapped children. The early education program supports the development of early education models to demonstrate a variety of effective approaches to teaching young handicapped children. The deaf/blind program develops innovative programs to provide comprehensive diagnostic and evaluative services for deaf-blind children and consultative services to parents, teachers and others. Other programs--the learning disabilities program, the child advocacy program, the media services, and teacher training programs, and the work of the Research Division are all concerned with providing better educational services to handicapped children.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below[**]

- Social-emotional development
- Health and/or welfare services
- Child advocacy
- Physical, cognitive, social-emotional development
- Life space
- Cognitive, social-emotional development
- Other children (not handicapped or disadvantaged)
- T.V. instruction
- Computer-assisted instruction
- Planning

16% - 39%

- Physical development
- Cognitive development
- Whole child
- Disadvantaged children
- Methodology

40% or above

- Family-related
- Parent training
- Child care and/or preschool education
- Community involvement
- Handicapped children
- Dissemination
- Individualized instruction

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[*] Includes $1.4 million for 37 teacher training projects.

[*] When no research was reported within a category, the name was not included.

Bureau for the Education of the Handicapped,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72*:
  (Categories are not mutually exclusive.)

Basic Research	.5%
Applied Research	1.9%
Development	52.7%
Demonstration	42.0%
Evaluation	1.4%
Long-term Studies (longer than one year)	40.7%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

National Center for Educational Research and Development,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $18.0 million

- Number of Programs or Projects Active in FY '72: 47[*]

- Mission and/or Functions in Early Childhood Research:

Many of the programs of NCERD have been transferred to the National Institute of Education. During its last year as an agency, NCERD continued to support the regional educational laboratories and several university-based R and D centers. The former concentrated on developing answers to current educational problems, while the R and D centers focused on comprehensive child care models or instructional systems. In addition to the work of the labs and the centers, NCERD has sponsored a program of basic studies relating to the fundamentals of the teaching and learning process, and a regional research program of small grants to educational institutions, both of which have supported research relating to young children.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below[**]

- Parent training
- Community involvement
- Physical, cognitive, social-emotional development
- Life space
- Cognitive, social-emotional development
- Methodology
- Planning
- Individualized instruction
- T.V. instruction
- Computer-assisted instruction

16% - 39%

- Family-related
- Disadvantaged children

40% or above

- Cognitive development
- Social-emotional development
- Child care and/or preschool education
- Other children (not handicapped or disadvantaged)
- Dissemination

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[*] A number of these are broad efforts consisting of component projects which, if counted, would increase the overall total by half or more.

[**] When no research was reported within a category, the name was not included.

National Center for Educational Research and Development,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72[*]:
(Categories are not mutually exclusive.)

Basic Research	21.3%
Applied Research	17.0%
Development	53.2%
Demonstration	2.1%
Evaluation	2.1%
Long-term Studies (longer than one year)	40.4%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

Bureau of Elementary and Secondary Education,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: Follow Through Program, $10.7 million*
- Number of Programs or Projects Active in FY '72: 29
- Mission and/or Functions in Early Childhood Research:

The purpose of the Follow Through Program is to sustain and supplement in the primary grades the gains made by low-income children who have had a full year's experience in Head Start or a comparable preschool program. It is designed to provide comprehensive services, i.e., instructional, nutritional, health, social work and psychological services, as well as staff development and parent participation. The majority of the research associated with Follow Through is in program development with an important emphasis given to program evaluation.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below**	16% - 39%	40% or above
Physical development	Community involvement	Cognitive development
Whole child	Cognitive, social-emotional development	Social-emotional development
Physical, cognitive, social-emotional development	Methodology	Family-related
Planning	Individualized instruction	Parent training
Dissemination		Child care and/or preschool education
Computer-assisted instruction		Disadvantaged children

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*The research or research-related activities of BESE's Title I (compensatory education) and Title III programs (innovative and supplementary education) are not included in this report.

**When no research was reported within a category, the name was not included.

Bureau of Elementary and Secondary Education,*
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72**:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	0%
Development	17.2%
Demonstration	72.4%
Evaluation	10.3%
Long-term Studies (longer than one year)	65.5%

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*Follow Through Program

**The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

Bureau of Elementary and Secondary Education,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: Division of Bilingual Education, $30.7 million

- Number of Programs or Projects Active in FY '72: 180

- Mission and/or Functions in Early Childhood Research:

The Bilingual Education Division develops and operates bilingual programs aimed at meeting the special educational problems of children who come from environments where the dominant language is not English and who have limited English-speaking ability. Children speaking Spanish, French, Chinese and a score of American Indian languages are among those served. Curriculum development, staff training and parent and community involvement are important aspects of the Division's projects.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*

Physical development
Child advocacy
Physical, cognitive, social-emotional development
Handicapped children
Other children (not handicapped or disadvantaged)
Methodology
T.V. instruction

16% - 39%

Parent training
Life space
Cognitive, social-emotional development
Individualized instruction
Dissemination

40% or above

Cognitive development
Social-emotional development
Family-related
Child care and/or pre-school education
Community involvement
Disadvantaged children

*When no research was reported within a category, the name was not included.

Bureau of Elementary and Secondary Education*
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	0%
Development	5.0%
Demonstration	95.0%
Evaluation	0%
Long-term Studies (longer than one year)	95.0%

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*Division of Bilingual Education

National Center for Educational Technology,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $8.7 million

- Number of Programs or Projects Active in FY '72: 6

- Mission and/or Functions in Early Childhood Research:

The Center supports research for program development and evaluation primarily in the area of television instruction. A variety of kinds of TV research are supported: language development for preschoolers, reading instruction, programs for bilingual children, and in the Rocky Mountain region, a demonstration is planned of the use of a communications satellite to deliver educational programs to young children in the remote areas of eight states.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*	16% - 39%	40% or above
	Physical development	Cognitive development
	Community involvement	Social-emotional development
	Physical, cognitive, social-emotional development	Family-related
	Handicapped children	Parent training
	Other children (not handicapped or disadvantaged)	Child care and/or preschool education
	Computer-assisted instruction	Disadvantaged children
	Planning	T.V. instruction
		Cognitive, social-emotional development
		Dissemination

*When no research was reported within a category, the name was not included.

National Center for Educational Technology,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72[*]:
(Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	16.6%
Development	33.3%
Demonstration	50.0%
Evaluation	0%
Long-term Studies (longer than one year)	33.0%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

National Center for Educational Communication
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $531,000

- Number of Programs or Projects Active in FY '72: 8

- Mission and/or Functions in Early Childhood Research:

As part of the Office of Education's educational renewal program to help solve pressing local educational problems, NCEC has two basic objectives. One is to appropriately assemble information based on research findings and effective educational practices, and the second is to disseminate this information in formats and ways which will be optimally useful to state and local agencies. The projects reported here fall primarily in the latter category and do not include the activities of the ERIC system (Educational Resources Information Center).

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*	16% - 39%	40% or above
Social-emotional development	Cognitive development	Other children (not handicapped or disadvantaged)
Parent education	Family-related	Dissemination
Child care and/or preschool education	Disadvantaged children	
Whole child		
Life space		
Planning		
Community involvement		
Handicapped children		

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*When no research was reported within a category, the name was not included.

National Center for Educational Communication,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72*:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	0%
Development	63%
Demonstration	0%
Evaluation	0%
Long-term Studies (longer than one year)	0%

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*The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

United States Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: Right to Read Program, $12 million

- Number of Programs or Projects Active in FY '72: 1

- Mission and/or Functions in Early Childhood Research:

The major goal of the national Right to Read effort is to help insure effective reading instruction both for children of school and preschool age and for adults in the community. The Right to Read Office collects and disseminates information on effective reading programs and, in its first year in the schools, will assist in training teachers in the use of a variety of materials and methods. In addition to administering its own funds, the Right to Read Program has the responsibility for coordinating all Office of Education reading or reading-related grants.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*	16% - 39%	40% or above
		Cognitive development
		Family-related
		Parent training
		Child care and/or preschool education
		Community involvement
		Handicapped children
		Disadvantaged children
		Other children (not handicapped or disadvantaged)
		Dissemination
		Individualized instruction

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*When no research was reported within a category, the name was not included.

Right to Read Program
United States Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	0%
Development	0%
Demonstration	100.0%
Evaluation	0%
Long-term Studies (longer than one year)	100.0%

National Center for the Improvement of Educational Systems
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: Early Childhood Personnel Training,[*] $4.4 million

- Number of Programs or Projects Active in FY '72: 35

- Mission and/or Functions in Early Childhood Research:

The objective of this NCIES program is to improve the supply of qualified teacher trainers, supervisors, curriculum and evaluation specialists, teachers and aides for all early education by supporting projects to train or retrain school personnel. A special aim is to increase the number of educational personnel trained to teach disadvantaged children. This program is included in this report because of the importance of training for the dissemination of research results and because of its concern with early childhood learning. Inasmuch as it is not a research program as such, it was not analyzed in detail.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below[**]	16% - 39%	40% or above
		Disadvantaged children Other children (not handicapped or disadvantaged) Dissemination

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[*] When no research was reported within a category, the name was not included.

*Formerly a part of the Bureau of Educational Personnel Development.

National Center for the Improvement of Educational Systems
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	5.7%
Development	91.4%
Demonstration	0%
Evaluation	2.9%
Long-term Studies (longer than one year)	100.0%

Office of Program Planning and Evaluation,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $1.8 million

- Number of Programs or Projects Active in FY '72: 6

- Mission and/or Functions in Early Childhood Research:

This Office has the evaluation, planning and budgetary responsibility for the Office of Education. OPPE designs and administers evaluations of ongoing OE programs (including early childhood research) and develops program plans and alternative strategies. Agency budgetary allocations are made in accordance with the program evaluations and planning strategies.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below*	16% - 39%	40% or above
	Cognitive development Social-emotional development Family-related Community involvement Dissemination Planning	Disadvantaged children Other children (not handicapped or disadvantaged)

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*When no research was reported within a category, the name was not included.

Office of Program Planning and Evaluation,
U. S. Office of Education, DHEW

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72[*]:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	33.0%
Development	0%
Demonstration	0%
Evaluation	66.0%
Long-term Studies (longer than one year)	16.7%

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[*] The percentage figures do not add to 100% because (1) not all kinds of research are included and (2) information on these categories was not always available.

Office of the Assistant Secretary for Planning and Evaluation,
Department of Health, Education and Welfare

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $360,000

- Number of Programs or Projects Active in FY '72: 5

- Mission and/or Functions in Early Childhood Research:

This central Office serves primarily a planning, coordinating and evaluative function for the Department of Health, Education and Welfare. It focuses on programs of Secretarial and Administrational concern, on areas of high priority not specifically under the jurisdiction of particular agencies, and on problems which cross-cut the concerns of different agencies.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below[*]	16% - 39%	40% or above
	Cognitive development	Family-related
	Social-emotional development	Community involvement
	Parent training	Disadvantaged children
	Health and/or welfare services	Handicapped children
	Life space	Methodology
	Cognitive, social-emotional development	
	T.V. instruction	
	Planning	
	Other children (not handicapped or disadvantaged)	

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[*] When no research was reported within a category, the name was not included.

Office of the Assistant Secretary for Planning and Evaluation,
Department of Health, Education and Welfare

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72:
(Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	0%
Development	0%
Demonstration	0%
Evaluation	100%
Long-term Studies (longer than one year)	20%

Office of Economic Opportunity,
Executive Office of the President

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH

- FY '72 Funding: $1.4 million[*]

- Number of Programs or Projects Active in FY '72: 3

- Mission and/or Functions in Early Childhood Research:

The research program of OEO is directly related to the solution of problems of poor families and their children and has had a major focus on the development, utilization, and evaluation of day care and child care programs. Its latest efforts study the roles of parents and communities in assisting child development. Other programs having social policy implications, such as various kinds of housing plans, are also studied, along with means of effectively disseminating research information.

- FY '72 Distribution of Research by Area (Categories are not mutually exclusive. One study may involve several of the areas listed.)

15% or below[**]	16% - 39%	40% or above
		Physical development
		Cognitive development
		Social-emotional development
		Family-related
		Parent training
		Health and/or welfare services
		Child care and/or preschool education
		Physical, cognitive, social-emotional development

40% or above, cont'd.

Community involvement
Cognitive and social-emotional development
Life space
Disadvantaged children
Methodology
Dissemination

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[*] One policy research study was funded at $800,000 in FY '72, bringing the FY '72 total to $2.2 million for four studies. Details were not received in time to be included in this tabulation.

[**] When no research was reported within a category, the name was not included.

Office of Economic Opportunity,
Executive Office of the President

FISCAL YEAR 1972 ACTIVITY IN EARLY CHILDHOOD RESEARCH (Continued)

- Distribution of Research by Kind of Research in FY '72:
  (Categories are not mutually exclusive.)

Basic Research	0%
Applied Research	0%
Development	100%
Demonstration	0%
Evaluation	0%
Long-term Studies (longer than one year)	100%

Analysis of FY '72 Early Childhood Research by Agency

The following program analyses are based on the individual program descriptions of the preceding pages. This chapter will conclude with a summary analysis of the overall Federal research picture, pointing out areas in need of further study.

Office of Child Development. The broad variety of concerns of the Office of Child Development (126 projects) is suggested by the relatively large amount of research it supports in many of the priority areas recommended by the Panel. Over 40 percent of its projects include research on family-related studies, child care projects, and disadvantaged children. Studies on social-emotional development and on research methodology are studied in over 35 percent of the projects. It is the only agency with substantial amounts of study in the "life space" area (18 percent) and has two development processes under study in 21 percent of its projects, i.e., cognitive and social-emotional development are both being investigated in 26 studies. Studies on community involvement and dissemination rank 31 percent and 23 percent respectively. It has a fairly even distribution as seen in Table 2 among the various kinds of research giving almost as much attention to basic research as to development, demonstrations, and evaluations, with 18 percent of the research planned for long-term investigation.

National Institute of Child Health and Human Development. The National Institute of Child Health and Human Development (NICHD) is clearly shown in Table 1 to be primarily concerned with physical or physiological growth and development (146 projects). No other agency (which reported more than one program) has as much of its effort going into this area, which

TABLE 1. Distribution of Areas of Research by Agency* Based on Number of Programs or Projects in Each Agency, FY '72

(Categories are not Mutually Exclusive)

	OCD N=126	NICHD N=146	NINDS N=1	NIMH N=103	MCHS N=40	SRS N=7	BEH N=207	NCERD N=47	BESE FT N=29	Biling Ed. N=180	NCET N=6	NCEC N=8	Right to Read N=1	NCIES N=35	OPPE N=6	OASPE N=5	OEO N=3
Physical Development	●	X	X		●		●				●						X
Cognitive Development	●	●	X	X	●		●	X	X	X	X	●	X		●	●	X
Social-Emotional Development	●	●	X	X	●			X	X	X	X				●	●	X
Family-Related Research	X		X	●		X	X	●	X	X	X	●	X		●	X	X
Parent Training	●						X		X	●	X		X			●	X
Health and Welfare Services					X	X										●	X
Child Care and/or Pre-school Education	X				●	●	X	X	X	X	X		X				X
Educational Technology							X		X	●	X		X			●	
Child Advocacy																	
Community Involvement	●						X		●	X	●		X		●	X	X
Whole Child			X				●										

X = Research in the area indicated was included in 40% or more of the agency projects.
● = Research in the area indicated was included in 16-39% of the projects.
No X or ● = Research in the area indicated was included in 15% or fewer, or no projects.

TABLE 1. Continued.

	OCD N=126	NICHD N=146	NINDS N=1	NIMH N=103	MCHS N=40	SRS N=7	BEH N=207	NCERD N=47	BESE FT N=29	Biling. Ed. N=180	NCET N=6	NCEC N=8	Right to Read N=1	NCIES N=35	OPPE N=6	OASPE N=5	OEO N=3
Cognitive, Social-Emotional and Physical Dev.			X								●						X
Cognitive and Social-Emotional Development	●		X						●	●	X					●	X
Life Space	●					●				●						●	X
Disadvantaged Children	X		X			●	●	●	X	X	X	●	X	X	X	X	X
Handicapped Children		●	X	●	●	●	X				●		X			X	
Other Children(not handicapped or disadvantaged)	X	X	X	X	X	X		X			●	X	X	X	X	●	
Methodology	●	●	X			X	●		●							X	X
Planning											●				●	●	
Dissemination	●				●		X	X		●	X	X	X	X	●		X
Basic Research	●	X	X	X		●		●									
Applied Research**	X				X	X	X	X	X	X	X	X	X	X	●		X
Evaluation	●				●										X	X	
Long Term Studies (more than one year)	●	●	X	●	X	X	X	X	X	X	●		X	X	●	●	X

*Read down to determine agency foci. Read across for research emphases in FY '72.

**Includes development and demonstration research.

is included in 43 percent of the work of this agency. About 9 percent of the research on physical development includes the study of cognitive and social-emotional development in the same projects. This agency also has more work than any other in basic research (95 percent), of which 27 percent is long-term research.

National Institute of Neurological Diseases and Stroke. The National Institute of Neurological Diseases and Stroke (NINDS), which is included in the data analysis for the first time, reported on one very large project which began in 1959 and will continue until 1974. The Collaborative Perinatal research project, which is long-term basic research, studies variables of pregnancy which may affect children's neurological development. It is obviously family-related research. It studies the whole child and all three developmental processes together, and it includes in its population children who are disadvantaged and handicapped and those who are not. A primary interest has to do with the methodology of conducting large-scale, long-term basic research.

National Institute of Mental Health. Basic research is of primary importance in the National Institute of Mental Health (NIMH), with 82 percent of 103 studies giving basic research the major emphasis. Some research is conducted in nearly all the areas listed. Over 40 percent of the studies include work on social-emotional development and on cognitive development, with 13 percent on physical development. However, fewer than 15 percent of the studies are concerned with life space or whole child emphases. Family-related research is included in close to 25 percent of the studies and methodology is the focus in 12 percent. Over 30 percent of NIMH research is directly related to the study of the mentally ill

Table 2. Agencies Specializing in Different Kinds of Early Childhood Research, FY '72

(Research categories are not mutually exclusive)

Agency Research Found in 40% or more Projects

Basic Research	Applied Research	Evaluations	Other*
NICHD	OCD	OPPE	NCES
NINDS	MCHS	OASPE	
NIMH	SRS		
	BEH		
	NCERD		
	Follow Through		
	NCEC		
	NCET		
	Right to Read		
	NCIES		
	Bilingual Ed.		
	OEO		

In less than 40%, but more than 15% of the Projects

Basic Research	Applied Research	Evaluations	Other*
OCD	OPPE	OCD	OPPE
SRS		MCHS	
NCERD			

In 15% or less of the Projects

Basic Research	Applied Research	Evaluations	Other*
MCHS	NICHD	NIMH	OCD
BEH	NIMH	BEH	NICHD
		NCERD	NIMH
		NCIES	MCHS
			NCERD

*Includes state-of-the-art studies, surveys, summaries, conferences.

(handicapped) child while the remainder of the research is concerned with the mental health of all children.

Maternal and Child Health Service. In the Maternal and Child Health Service (MCHS), which is primarily concerned with the overall health of mothers and children and the delivery of health services, the major emphasis is on applied research (over 45 percent of projects), as such, with additional amounts designated for development and demonstrations, along with 20 percent for evaluations. It ranks highest of all the agencies in health and welfare services research (included in 45 percent of 40 projects) with relatively large amounts concerned with children having different kinds of handicapping conditions. Child care research is involved in 17.5 percent of the projects and 15 percent have direct family-related interests. The development of better methodology for evaluation of health programs is a primary interest in 12 percent of the projects of the Maternal and Child Health Service.

Social and Rehabilitation Service. Table 1 shows the major child research interest for SRS to be in the welfare services area, with a strong family focus and concern for children in disadvantaged, handicapped, and other categories. Two of its seven projects reported study of the overall life space and three included methodological research. Although only two studies include research on child care, they represent 28 percent of the total. Twenty-eight percent of the studies focus on basic research and the same amount are primarily of a demonstration nature. Over half are long-term research projects.

OE, Bureau of Education of the Handicapped. The largest amount of the work of this agency (207 projects) is in development and demonstration--over

50 percent of the projects representing the former and over 40 percent, the latter. Large amounts of research focus on family-related studies (over 60 percent) and parent education is included in 45 percent of the research. About 40 percent of the projects include the involvement of the community; the involvement of parents and community agencies helps account for the large amount of research designated as having a dissemination aspect (66 percent). Early childhood education is a primary objective of BEH and 60 percent of the reported research and development projects focus on 0-5 age children while 40 percent of the total are concerned with individualized instruction. In this bureau, 100 percent of the research focuses on the handicapped child and of this amount, 16 percent is concerned with disadvantaged children. Interest in all the needs of the handicapped child is suggested by the fact that in 26 percent of the projects the study of the whole child is of specific concern.

OE, National Center for Educational Research and Development. It is difficult to get a good picture of the NCERD research because included in its 47 projects is all the research of the educational laboratories and the research and development centers whose many studies were grouped together and reported as some 18 broad programs. This means their wide-ranging and varied research may not be adequately represented in Table 1, which gives the $10,000 projects of the regional research program equal weight with lab and center programs. With this in mind, we can take the figures to represent trends in the NCERD research. Large amounts are shown in cognitive and social-emotional development studied separately (66 percent and 48 percent), with 13 percent of the projects including both these processes in the same study. There is heavy emphasis on child care research (55 percent), with 30 percent of the projects studying disadvantaged children. Research on dissemination of research findings is of concern in 40 percent of the projects. As for the kind of research, most of the work is in development (53 percent) with 21 percent in basic research. Forty percent are long-term studies.

OE, Follow Through Program. The Follow Through Program concentrates heavily on disadvantaged children in its effort to maintain the gains made in preschool programs by these children as they move into the primary grades. Although the emphasis is on cognitive development (72 percent of 29 projects), social-emotional development (65 percent) and physical health (10 percent) are given attention also. The concern for the first two is shown by the large number of studies including cognitive and social-emotional development in the same projects. Follow Through is a child care program (83 percent of the projects) in that it attempts to answer the comprehensive needs of the child. This is reflected in the family-related nature of the work and the emphasis on parent education (62 percent). The interest in the needs of the individual child is seen in the relatively large amount of work including individualized instruction.*

OE, Division of Bilingual Education. The bilingual education program, (180 projects including children to eight years of age) focuses on a special group of children who are often disadvantaged and 87 percent of the studies include disadvantaged children. Since it is concerned with providing educational programs for children for whom English is not the dominant language and at the same time preserving ethnic pride, this program has high percentages of research in cognitive development (97 percent) and in social-emotional development (93 percent). Family involvement and community participation and support are considered essential elements in the bilingual education program, with over 95 percent of the projects including these elements. Nineteen percent of the bilingual projects are considered "life space" studies. This is primarily a demonstration program with projects running for five years, at the end of which time they are expected to be ready for local administration.

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*Included in educational technology in Table 1.

OE, National Center for Educational Technology. The six projects of this Center all have a special focus on television instruction.* While its small number of projects may inflate the percentages as compared with other agencies, the percentages do reveal the nature of NCET work. Eighty-three percent of the work includes cognitive development, 66 percent social-emotional development, and 66 percent of the studies include cognitive and social-emotional development together. Sixty-six percent are also concerned with preschool education. At least four of the projects are family-focused and several seek to involve the community. Half have dissemination objectives, half include demonstrations and a third are development oriented. At least two are planned as long-term research.

OE, National Center for Educational Communication. The school-related focus of NCEC is apparent from the distribution of research by areas in the eight projects reported. All the projects included dissemination objectives and all are aimed (directly or indirectly) at the general school population, with handicapped or disadvantaged children included in a number of the projects. Cognitive development (a primary concern of the schools) stands at 22 percent. The growing recognition of the importance of the family and community participation in education is suggested by the representation of these areas in 22 percent and 11 percent of the studies, respectively. NCEC projects are classified as development efforts.

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*Included in educational technology in Table 1.

OE, Right to Read Program. The Right to Read Program, aimed at raising the literacy level of adults and children alike, started its first year of operation in the Fall of 1972. It was reported, therefore, as one program although it will be operating eventually in several hundred schools and communities. It is primarily concerned with cognitive development and for the purposes of this report, operates at the preschool education level, with an emphasis on individualized instruction.* Teacher and parent education and community involvement are essential elements of this long-term development and demonstration program.

OE, National Center for the Improvement of Educational Systems. The early childhood personnel training program of NCIES (35 projects) is included in this report because of the importance of teacher training for the dissemination of research findings. The direct contact between teacher and student can be one of the best ways of implementing what researchers have discovered about how children develop and learn. This is a program for adults working with children, many of whom are disadvantaged. It is classified as a development and dissemination program aimed at the improvement of preschool education for all children.

OE, Office of Program Planning and Evaluation. Four of the six projects reported to be concerned with early childhood by OPPE are evaluation projects; two have planning objectives. Two projects include the investigation of cognitive development, and three include disadvantaged children as part of the research population. One project includes social-emotional development and one relates to dissemination. OPPE research is directly related to programs supported in other parts of the Office of Education.

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*Included as part of educational technology in Table 1.

Office of the Assistant Secretary for Planning and Evaluation. Some of the functions of this office are similar to those of OPPE in the Office of Education. It is concerned with the effectiveness of the programs of the Department of Health, Education and Welfare. Its research projects in early childhood are primarily evaluations. Three out of six projects are concerned with research including community involvement; three include the study of research methodology. Two look at family-related research, and disadvantaged children and handicapped children are included in two studies. Several of the research categories are included in single projects.

Office of Economic Opportunity. The three Parent and Child Development Centers reported by OEO are research and development projects aimed at developing, over time, models for child care that can be replicated in other locations. The programs are comprehensive in nature. The aim of meeting all the child's needs and assisting his total development through child care programs, which call on parents and community agencies, means these projects cover nearly all the categories used for analysis, including health and welfare services. The three developmental processes are of equal concern in each of the projects; disadvantaged children are included in all. These projects have a particular interest in research methodology and means of replicating successful research and development models.

Table 1 summarizes the research efforts of the individual agencies. Scanning the appropriate vertical column provides an overview of any given agency's work, while the horizontal rows show the cross-agency picture in any one area of research. By means of the latter it is shown, for example, that nearly as many agencies support large amounts of work in social-emotional development as in cognitive development and that no agency supports any large number of projects in child advocacy.

To conclude the discussion on agency activity, their individual emphases in terms of kind of research are summarized in Table 2. It is obvious from Table 2 that the majority of agencies--OCD, MCHS, SRS, OE, and OEO--had the largest amount of effort in one of the applied research areas (to be discussed below). Three others, NICHD, NINDS and NIMH conducted 40 percent or more of their work in basic research and OASPE and OPPE supported evaluations primarily. The kinds of research supported in fewer than 40 percent of the projects by each agency, are also shown in Table 2.

Summary Analysis of All-Agency Research, FY '72

In this section we will discuss the areas and kinds of research which from an overall view are seen to be those which had the least--and conversely, the greatest--amount of Federal support in fiscal year 1972. Since the research categories used for analysis represent those designated by the Interagency Panel as being of high priority concern, the discussion will serve to point up some possible gaps in research pertaining to young children. Relatively small numbers of projects or low funding amounts do not indicate necessarily, in and of themselves, insufficient research activity. Such information will, however, point out specific areas for the Panel to scrutinize more closely as they consider research activity in relationship to research need.

Table 3 shows the distribution of research in priority areas, based on the grand total of the number of projects supported by all the agencies in FY '72. Here, as in all the tables, the projects represented by the

Table 3. All Agency Distribution and Rank Order (By Percent) of Areas of Research, FY '72[*]

N = 990 projects

		Percent Rank
41 to 45%	- Cognitive Development	45%
	- Child Care and/or Preschool Education	41%
31 to 40%	- Social-Emotional Development	39%
	- Family Related Research	37%
	- Disadvantaged Children	36%
26 to 30%	- Handicapped Children	29%
21 to 25%	- Parent Training	24%
	- Research Dissemination	23%
16 to 20%	- Physical Development	18%
	- Educational Technology	18%
	- Research on Methodology	16%
	- Individualized Instruction	16%
11 to 15%	- Cognitive, Socio-emotional Development	14%
	- Life Space	14%
6 to 10%	- Cognitive, Socio-emotional and Physical Development	6%
	- Whole Child	6%
1 to 5%	- Health and Welfare Services	5%
	- Television Instruction	2%
	- Research Planning	2%
	- Child Advocacy	2%
	- Computer-assisted Instruction	1%

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[*] Percentages are based on the total number of projects and represent non-mutually exclusive categories.

percentage for any one area may also include research in one or more of the other areas. The percentages do not represent mutually exclusive categories. Table 3 shows that, in the composite, no agency research area was studied in more than 45 percent of the total projects. The rank ordering of percents is included to assist analysis.

Following the trend of recent years, certain research areas continue to be more heavily supported than others. Thus cognitive development and child care research (includes day care and preschool education) continue to receive the most attention--and the most money (see Table 4). It is probable the strong support of research for disadvantaged children is related to the high amounts of research in cognitive development and child care. Although these three together continue to be heavily supported, other areas which have been suggested as needing more investigation are beginning to appear and stay in the top ranks. These include social-emotional development, family-related research, and dissemination of research findings. The increase in the latter over last year may be a result of the addition of data from some new research programs, as well as increased activity in former programs or agencies. The Division of Bilingual Education, participating for the first time, classified 95 percent of the 180 projects it reported as including dissemination, and BEH, an agency with a large number of projects reporting for the second time, includes various means of dissemination to implement its expanded research efforts. Parent training (ranking relatively high) represents an aspect both of dissemination efforts and the growing concern with the influence of the family on children. Research on methodology, that is, on ways of improving the research process, has increased to 16 percent from six percent for last year. Over half of the projects classified for methodology deal with the development of tests for measuring specific development factors or changes in special populations. Research on educational technology owes its relatively high ranking to an increase in individualized instruction, which may be a function of this year's new data inputs. Television instruction projects and those including computer assisted instruction were relatively few in number.*

The areas of research that continue to have relatively low inputs of activity and money are child advocacy, planning, and those areas, which, as a group, represent the so-called "global approach" to research. Research on child advocacy is still in its initial stages and, perhaps because of the addition of new research programs in this report, shows relatively less activity than last year. In planning, activities which attempt to establish specific objectives and procedures for wide-scale research programs or to set up broad-based research information systems or facilities remain at a very low level. All the research planning activity may not have been available for this report, and although the Panel itself is establishing a research data base, there is a great need in the realm of child research to integrate available information from within and without the Federal agencies and to take definite steps in using it to plan future research programs.

In order to determine how much research activity was focusing on the child as a total entity, affected by many aspects of his surroundings, the data was examined in a variety of ways. Projects were classified (1) as studying the whole child, (2) as studying the "life space" within which the child moves, (3) as studying all three developmental processes (cognitive, physical, and social-emotional) and (4) as focusing on two processes: cognitive and social-emotional development, without physical growth. Projects classified as including life space study represent 14 percent of the total projects, as do those looking at cognitive and social-emotional development in the same study. Whole child studies and studies looking at all three processes, however, fall to six percent of the total projects for each group of studies. Further, those projects which were classified as studying the whole child in his life space, in the same project, were less than one percent of the total. Projects studying life space and all three developmental processes in the same effort represent 2.5 percent of the total, or 25 out of 990 projects. The last set of figures perhaps represents the closest approximation to the "global approach" that was obtained.

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*The educational technology category covers individualized instruction, television instruction and computer-assisted instruction.

The last area to be considered is research relating to health and welfare services. It represents a relatively low percent of the total and as such illustrates a point regarding a characteristic of the figures used for this analysis. Research in this area was supported almost exclusively by one agency, the Maternal and Child Health Service, whose number of total projects and budget are relatively low when compared with the total number, or with larger programs. What this point illustrates is that research in every research area is affected by the particular mission-orientation and the size of participating agencies. Because these factors do differ from agency to agency, the overall figures given in Table 3 must be looked at in

Table 4

Total Amounts of Funding by Area of Research, FY '72

Actual Total Budget, $148.4 million	Overlapping Amounts*
Cognitive Development	$95.7
Child Care and/or Preschool Education	82.0
Family-Related Research	72.4
Disadvantaged Children	70.6
Social-Emotional Development	68.7
Research on Dissemination	57.8
Educational Technology	52.0
Handicapped Children	49.2
Individualized Instruction	38.9
Parent Training	36.7
Cognitive and Social-Emotional Development	36.0
Physical Development	28.8
Life Space	26.5
Research on Methodology	24.8
Television Instruction	24.3
Cognitive, Social-Emotional and Physical Development	18.8
Whole Child	13.3
Health and/or Welfare Services	6.4
Computer-Assisted Instruction	4.8
Research on Planning	2.3
Child Advocacy	2.0

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*Some or all of the funding amount for any one area may have supported research in other areas also. Thus the sum of the individual amounts does not equal the actual total budget.

conjunction with information about each agency's research, in determining what are the possible gaps in the priority research areas discussed here. With regard to health services, for example, these questions might be asked: What specific research does the $3 million budget of MCHS support for the health care of mothers and young children? How might this effort be related to those of NIMH and BEH, which also serve children with health problems, or to that of NICHD, which conducts basic research relating to child health? Answers to questions such as these are needed in order to make the coordination of research efforts optimally effective in all areas of early childhood research.

Table 4 shows total amounts of funding by all agencies for each area of research. Here again the amounts do not represent spending for mutually exclusive categories. What the first figure means, for example, is that $95.7 million was spent in projects which included the study of cognitive development. Except for the amount indicated for television research, the spending totals follow approximately the same rank order, by area, as the percentages of the total number of research projects shown in Table 3. (The development of T.V. instruction tends to be relatively more expensive than other kinds of R and D activity.) Thus the funding amounts, in general, indicate the same highs and lows of support in the selected research areas as do the number of projects.

Tables 5, 6 and 7 deal with kinds of research, rather than areas of research. The percentages represent projects for which the primary thrust of the research was indicated to be basic, applied, evaluation, or "other"

Table 5 *

PER CENT OF TOTAL NUMBER OF RESEARCH PROJECTS BY KINDS OF RESEARCH, FY '72

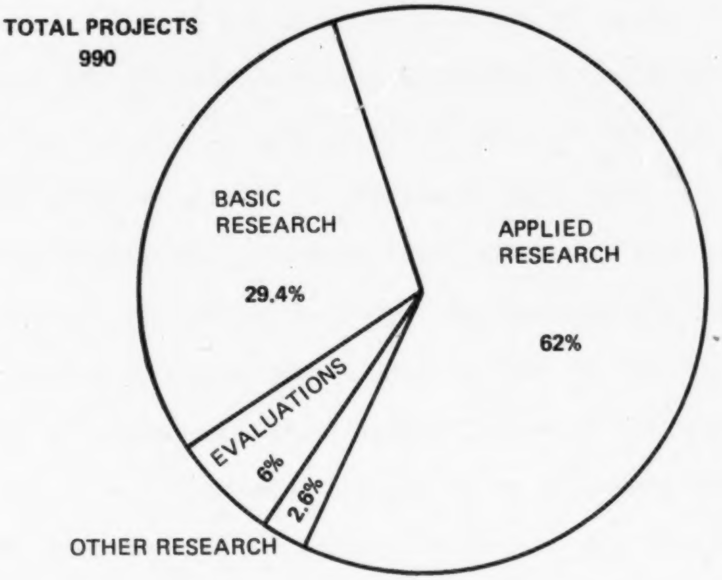
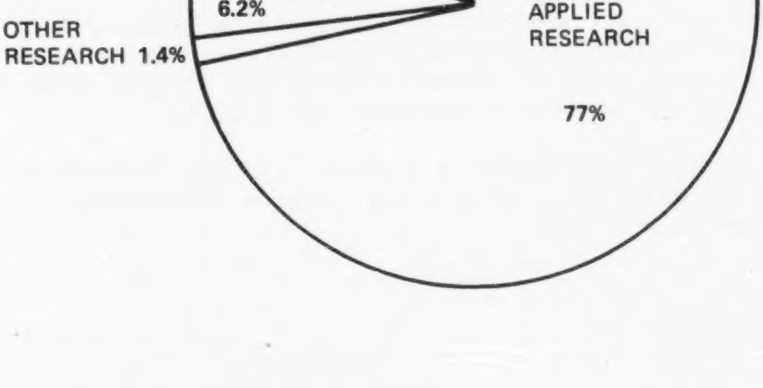


Table 6 *

PER CENT OF TOTAL FUNDING BY KINDS OF RESEARCH FY '72



*Percentages represent non-mutually exclusive categories.

research.[*] In other words, the categories are not mutually exclusive. These Tables show a very heavy preponderance of FY '72 support going to applied research--both in number of projects and funding level. (Table 5 shows the distribution of numbers of projects; Table 6, the distribution of funding.) The kind of research which comes closest to applied research is basic research, with about 29 percent of all the projects and 15 percent of the total funding supporting basic research. Evaluation (six percent for both numbers and funding) and "other" research (2.6 percent of total projects; 1.4 percent of funding) come far below the 62 percent and 77 percent figures which represent, respectively, the amount of the total effort and total funding given to applied research.[**]

The relatively high expense of applied research as compared with other categories is made clear in Table 7. For example, while there were about twice as many projects in the applied research category as in basic research, the budget for applied was about five times that for basic research. (Demonstrations as a major subcategory of applied research, represent about one-third of the total research effort and 45 percent of the funding.) The question as to whether more support needs to be given to basic research and kinds other than applied, is one which the Panel may study as it continues its efforts to coordinate Federal research across agencies. Greater detail on the kinds and areas of research being considered for investigation is presented in the next chapter.

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[*] Applied research includes development, demonstration and pilot studies, plus 49 studies classified as applied without further differentiation. "Other" kinds include state-of-the-art studies and surveys; summaries and analyses of existing data; conferences and symposia.

[**] Evaluation is frequently included as a phase of other research categories. The percentage for Evaluation as used here stands for studies in which the major concern was to evaluate.

Table 7

Comparison of Total Projects and Funding by Kind of Research, FY '72*

N=990 % of Projects	Kind of Research	Total=$148,415,262 % of funding
62.0%**	Applied Research	77.0%**
(25.0%	Development	29.0%)
(32.0%	Demonstration	45.0%)
29.4%	Basic Research	15.4%
6.0%	Evaluations	6.2%
2.6%	Other	1.4%

*Percentages represent non-mutually exclusive categories.

**Development and demonstration figures included in total for applied research.

CHAPTER II

AGENCY PLANS FOR EARLY CHILDHOOD RESEARCH

The FY '72 research commitments of the agencies comprising the Interagency Panel on Early Childhood Research and Development are described and analyzed in the previous chapter. This chapter describes and analyzes the FY '73 revised research plans and the FY '74-'78 forward planning of the member agencies. The analyses to be presented relate the plans of the agencies to the research recommendations of the Interagency Panel that are reviewed in Chapter I.

The first section below summarizes the combined research efforts of the member agencies. The second section presents an analysis and brief descriptions of each agency's '74-'78 forward planning and uses the FY '73 revised plans as the basis for analysis. The last section examines in greater depth the degree of effort to be expended by agencies in the different research areas. The major research areas used in Chapter I as the basis for the analysis of FY '72 research are included here also. Tables 8 - 11 in this report correspond to this organization which, in turn, is similar to that used by the Panel in its 1971 annual report entitled Toward Interagency Coordination: An Overview of Federal Research and Development Activities Relating to Early Childhood and Recommendations for the Future.

Section 1: An Overview Analysis of Present And Future Research Plans

New Starts Clarify New Priorities and New Emphases

For many agencies funding early childhood research and development activities, continuations of support for research activities from previous fiscal years comprise a large share of each new fiscal year's budget. This fact often clouds the shifts in priorities and concerns of the agencies as they attempt to develop new priorities in light of new government policy and new knowledge resulting from previous and current studies. In order, then, to grasp what the new priorities are and what the shifts of concern are, it is helpful to look at areas identified for new starts. And, the new concerns may best be clarified by defining where an agency is putting its new money for new starts in research.

Interagency Panel Influences New Starts

Some of the new starts in research and new priorities reflect the influence of the Interagency Panel on Early Childhood Research and Development. In its 1971 annual report, the Interagency Panel identified certain general approaches to research which were "judged by the Panel members to be the most promising at this point in time for yielding useful and meaningful research results" (p. 3). The research approaches identified were:

- Research which benefits all children
- Longitudinal research
- Holistically oriented research
    research on the "total child"
    research on the "total life space" of the child
- Policy related research
- Studies to improve the research process itself
    goal oriented research
    methodological improvement
    information communication and dissemination

Some of the effects of these recommendations appear in the revised FY '73 plans while still more emerge in the FY '74-'78 forward planning.

The sharp increase of interest in longitudinal studies appears in the FY '73 revised plans and continues into the FY '74-'78 forward planning. The interest of the Interagency Panel in this area is reflected in a statement made available by the Panel concerning the importance of longitudinal research, particularly that which includes an intervention component, and in the Panel's urging that the member agencies place longitudinal/intervention high on their research priorities. (See the statement issued by the Interagency Panel dated October, 1972.)

Holistically oriented research, including research related to the "total child" and to the child's "total life space," has increased both in the FY '73 and the FY '74-'78 planning. This increase is expressed in the category of Whole Child (listed in Tables 8 and 9 under the research area, entitled Development Processes), and in the categories of Primary Environment, Combined Influences and Life Space (listed under the research area, entitled Environmental Effects). The word, Ecological, appears as an additional aspect of Environmental Effects.

NIMH, for example, has introduced a new category for research called Ecological Investigations of Child Development. While this refers to the environment, it probes more deeply and in a new way. It concerns studies of child rearing and development which take into account the variety of social matrices in which the child develops and those which search out the impact of interactive influences on the child's learning, feelings and performance. Such influences include poverty, social class, peer group, rural-urban differences and minority group culture. OCD is moving in this direction away from a focus on the individual toward what might be called community processes, that is, to a concern with the individual interacting with "significant others" in the environment, to his interacting with institutions, and to institutions interacting with one another.

As in 1972, the member agencies continue to deemphasize cognitive development as a specific area of research (see Developmental Processes in Tables 8 and 9) and are moving toward an emphasis on social-emotional development, including cognitive aspects. NIMH, for example, has selected nonintellective aspects of development as a major area for funding. This area includes investigations of processes of personality development; affective aspects of development; the development of motives and values; factors involved in the development of ego competence; adaptive coping mechanisms; the development of social values and social orientations; the interrelationships between intellective and nonintellective processes; and, the positive integrative aspects of child development, such as imagination, creativity and prosocial behavior. OCD has virtually discontinued support of curriculum development programs that focus heavily on cognitive development and is emphasizing the support of studies on socialization that include cognitive development and performance. To the extent that these changes reflect a concern for the whole child, they correspond to the Interagency Panel's recommendation for looking at the "whole child" in research.

Again, focusing on the larger environment of the child, advocacy appears with increasing frequency as a priority area among the agencies. OCD is selecting advocacy as a major area of research concern, particularly as this agency looks at new services, utilization of research findings, and coordination of existing services and knowledge which may be related to

Table 8

AGENCY REVISED PLANS FOR MAJOR RESEARCH EFFORT IN FY '73, KINDS AND AREAS OF RESEARCH[1]

Areas of Research	OCD	NICHD	NIMH	MCHS	SRS	NIE[2]	BEH, OE	BESE, OE	NCIES, OE	NINDS	OEO	NCET*, OE	USDA
Development Processes													
Cognitive Development	x	x	x			x		x		x	x		
Social-Emotional Development	x	x	x		x	x		x			x		x
Physical Development	x	x	x	x				x		x	x		x
Whole Child	x		x		x	x	x	x		x	x		x
Environmental Effects (includes Ecological)													
Primary Environment	x	x	x			x		x			x		x
Social Programs	x		x	x	x						x		x
Child Advocacy	x		x	x	x		x						x
Child Care & Preschool Ed.	x		x	x	x	x	x	x	x		x		x
Family Involvement	x		x	x	x	x	x	x	x		x		x
Community Involvement	x		x	x	x	x	x	x	x		x		x
Combined Influences	x	x	x	x	x	x	x	x			x		
Life Space	x	x	x										x

Table 8 (Cont'd.)

	OCD	NICHD	NIMH	MCHS	SRS	NIE[2]	BEH, OE	BESE, OE	NCIES, OE	NINDS	OEO	NCET*, OE	USDA
Research Planning	x		x		x	x		x			x		
Research Dissemination	x	x	x		x	x	x	x	x				x
Research Methodology	x	x	x	x		x		x		x	x		x
Research Population													
Low-income children	x	x	x		x	x		x	x	x	x		x
Average-income or all children	x	x	x					x		x			x
Handicapped		x	x	x	x		x	x		x			
Individualized Instruction	x					x		x					
Television Instruction	x		x			x	x	x				x	x
Kinds of Research													
Basic Research	x	x	x			x				x	x		x
Applied Research	x	x	x	x	x	x	x	x	x	x	x		x
Evaluations	x		x	x	x	x		x			x		x
Longitudinal Studies	x	x	x	x	x	x		x		x	x		

[1] Areas of expected major thrusts are indicated. The x-marks represent planned efforts in a particular area.

[2] Over 75 percent of the FY '73 plans consist of activities initiated by OE.

*The National Center for Educational Technology (NCET), although not represented on the Interagency Panel, is conducting greatly expanded research on television programs for children.

Table 9

AGENCY FORWARD PLANS FOR MAJOR RESEARCH EFFORT FOR FY '74-'78, KINDS AND AREAS OF RESEARCH[1]

Areas of Research	OCD	NICHD	NIMH	MCHS	SRS	NIE	BEH, OE	BESE, OE	NCIES, OE	NINDS	OEO	NCET*, OE	USDA
Development Processes													
Cognitive Development	x	x	x			x		x		x	x		x
Social-Emotional Development	x	x	x		x	x		x			x		x
Physical Development	x	x	x	x				x		x	x		x
Whole Child	x		x		x	x	x	x		x	x		x
Environmental Effects (includes Ecological)													
Primary Environment	x	x	x			x		x			x		x
Social Programs	x		x	x	x				x		x		x
Child Advocacy	x		x		x		x		x				x
Child Care & Preschool Ed.	x		x	x	x	x	x	x	x		x		x
Family Involvement	x		x	x	x	x	x	x	x		x		x
Community Involvement	x		x	x	x	x	x	x	x		x		x
Combined Influences	x	x	x	x		x	x	x	x		x		x
Life Space	x	x	x										

Table 9 (Cont'd.)

	OCD	NICHD	NIMH	MCHS	SRS	NIE	BEH, OE	BESE, OE	NCIES, OE	NINDS	OEO	NCET*, OE	USDA
Research Planning	x		x		x	x		x			x		x
Research Dissemination	x	x	x		x	x	x	x	x				x
Research Methodology	x	x	x	x		x		x		x	x		x
Research Population													
Low-income children	x	x	x		x	x		x	x	x	x		x
Average-income or all children	x	x	x			x		x	x	x			x
Handicapped		x	x	x	x	x	x	x		x			
Individualized Instruction						x		x	x				x
Television Instruction	x		x			x		x				x	
Kinds of Research													
Basic Research	x	x	x			x		x		x	x		x
Applied Research	x	x	x	x		x	x	x	x	x	x		x
Evaluations	x		x	x		x	x	x	x		x		x
Longitudinal Studies	x	x	x	x		x		x		x	x		x

[1] Areas of expected major thrusts are indicated. The x-marks represent planned efforts in a particular area for FY '74-'78.

*The National Center for Educational Technology (NCET), although not represented on the Interagency Panel, is conducting greatly expanded research on television programs for children.

advocacy. NIMH, as it interacts with the community, inevitably becomes involved with advocacy. The agency has spelled out its concern by setting as one major goal the development of a program of action research or innovative methods for developing community, professional and institutional support for family care and the education of children, and for developing family, community and professional/institutional collaboration in fostering child development. BEH intends to develop, demonstrate, and disseminate innovative support systems and techniques to improve the performance of handicapped children and/or teachers and other practitioners serving the handicapped. MCHS is concerned with developing effective health delivery systems for mothers and children. In each case, advocacy is seen as a mechanism for the provision of services via an effective delivery system that will meet the needs of children and families: determining the needs, varying and comparing different delivery systems are the research aspects.

There is also a greater concern for improving the research process itself. The areas of concern for process improvement appear under the headings of Research Planning, Research Methodology and Research Dissemination in Tables 8 and 9.

The shift from independent research with specific hypotheses, goals, and methodologies to community based, broad social programs and social policy research is increasingly apparent. NIMH, under the category of Intervention Programs and Applied Research, intends to support research on the relationships which the helping professions, social agencies and public institutions have with families and communities, as these influence child development and the delivery of needed mental health services. OEO, increasing its concern with day care, intends to examine policy issues arising from the day care provisions of the Welfare Reform proposals including: (1) assessment of the effects of different kinds of child care situations of child behavior development; and (2) determination of the dimensions of demand for day care of different types. OCD also shows a greater concern with policy related research pertaining to day care.

As part of the problem of Research Methodology, each agency is aware of the difficulty of the assessment of programs, interventions, changes in behavior, etc., which results from the present limited measurement instruments. The agencies repeatedly allude to the problem and are increasingly clarifying the dimensions of the problem as well as focusing on some support of solutions. NIMH classifies the problem under Methodological Research and intends to support the investigation of methodological problems, such as the processes of gathering raw data, devising analytic procedures, and developing standardized instruments. To improve research methods, studies will be supported in early screening procedures and in the development of diagnostic and prognostic indicators. NIE proposes to develop new measuring techniques which: (1) do not discriminate against minority groups (2) measure accomplishments in problem-solving and social relationships; (3) measure the effectiveness of educational institutions; and (4) generally provide better data on which to base resource allocations. BEH will look at assessment via a state-of-the-arts study on testing for identification and diagnosis of handicapped children. MCHS intends to support studies on the evolvement of methodology and strategy for the evaluation of health programs. And, the Follow Through program (BESE) is concerned about issues related to sample selection and instrumentation to assess the cumulative effects of Follow Through, together with an increased assessment of interactive factors; i.e., poverty, compensatory education, and curriculum approach.

A greater interest in Research Dissemination also is emerging among the agencies and is shown in Tables 8 and 9. Historically, the problem of disseminating research information was addressed earlier than the problem of disseminating research program models. Research information generally is available, particularly through ERIC, but the dissemination of program models has not received the same attention. Clearly, the difficulties involved in program model dissemination are far more complex than those relating to research information, but the agencies find themselves increasingly concerned with the need to attend to program model dissemination. Follow Through within BESE, for example, is concerned with studying the process and probability of replicating Follow Through models. And OCD is taking steps to ensure that the knowledge gained through investigations and demonstrations will be incorporated into the ongoing programs of public and private agencies as well as programs for parents. NIE, through the National Center for Educational Communication (NCEC), will place a heavy emphasis on studying alternative means of delivering current knowledge and practice to the field and on implementing research results. BEH will focus on creating mechanisms that will produce the broadest possible diffusion, utilization, and implementation of the product of research and development.

Continued Gaps in Research

In spite of increased efforts on the part of most agencies to address the new and critical issues in early childhood research and development, a few areas identified as critical still are being neglected. These areas include: (1) research conducted to aid in policy decisions or planning for future research; (2) research concerning all children as contrasted with special groups (i.e., the low-income and handicapped); and (3) research using mass media and TV.

Deeper Analysis of FY '73 and FY '74-'78 Plans

In order to examine more closely the efforts of the member agencies of the Interagency Panel on Early Childhood Research and Development, Tables 10 and 11 are presented in the appendices. These Tables address specific research questions within the broad research areas discussed above and displayed in Tables 8 and 9. In addition to giving greater specificity to the research to be conducted, the degree of effort made by each agency for each research category may be surmised by using the symbols shown in the legends of Tables 10 and 11. Both Tables 10 and 11 indicate attention to specific research questions within broad research areas. Table 10 uses FY '72 plans as a basis for comparison of the degree of effort shown for FY '73 revised plans whereas Table 11 uses the FY '73 revised plans to make the same type of comparison for FY '74-'78 planning. The next section provides a description and analysis of FY '74-'78 forward planning from the perspective of FY '73 plans; the third section presents comparisons of the degree of effort expended by member agencies for FY '73 and FY '74-'78 plans and, used in conjunction with Tables 8 - 11, permits a greater depth of analysis of the total planning effort.

Section 2: A Description and Analysis of FY '74-'78 Forward Planning from the Perspective of FY '73 Revised Plans

Forward planning of the agencies is usually tentative because it does not reflect changes imposed by new and yet unformulated government policy decisions nor does it reflect changes suggested by findings from currently funded activities. Within these limitations, however, forward planning contributes greatly to the ability of agencies to commit themselves to long-range support of critical areas. They are less likely to think in terms of "one-year, quick-results" kinds of activities and more likely to plan for support of critical areas where time is an important factor in deriving valid results.

The agencies, then, tend to make forward plans in which the broad areas remain substantially the same and where changes occur within these broad areas. Some agencies, however, make major departures from previous and current activities. These are frequently the result of major shifts in government policy decisions, new findings from recent studies, or indeed, as in the case of NIE, the establishment of a new agency with new mandates. An examination of the forward planning of the agencies represented on the Interagency Panel on Early Childhood Research and Development clarifies the continuity of plans or the major departures in plans.

The FY '74-'78 forward planning in the area of early childhood research and development is substantially the same as the FY '73 revised plans for several agencies, including:

Maternal and Child Health Services (MCHS)
Bureau of Elementary and Secondary Education (BESE)
National Center for Educational Technology (NCET)
National Institute of Mental Health (NIMH)
National Institute of Child Health and Human Development (NICHD)
National Institute of Neurological Diseases & Stroke (NINDS)
Office of the Assistant Secretary for Planning and Evaluation (OASPE)

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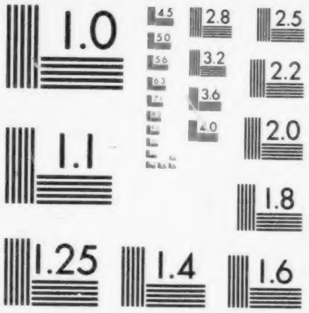
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Office of Economic Opportunity (OEO)

United States Department of Agriculture (USDA)

The agencies whose FY '74-'78 forward planning is markedly different from the FY '73 revised plans include:

Social and Rehabilitation Service (SRS)

Office of Child Development (OCD)

National Institute of Education (NIE)

National Center for the Improvement of Educational Systems (NCIES)

This classification of agencies in terms of change is not absolute, of course. The agencies that tend to retain the same orientation also show changes in some areas whereas those showing a tendency to change also support continuations of previous plans. The difference lies in the degree of emphasis given to change as compared with that given to the continuation of previous plans.

Maternal and Child Health Services (MCHS)

The rationale for continuity of plans from FY '72-'73 and FY '74-'78 forward planning is described by MCHS as follows:

> The research program began in FY '72 by focusing on the study of ways of intervening in health situations, and the way these methods of intervention, coupled with use of basic knowledge, could be infused into new forms of health delivery systems. One result was an ordering of the priorities in research based upon an orientation of the future. It was recognized that the research effort needed lead time--a minimum of three to five years--to impact upon a specific felt need. Thus, problems were

identified which were not yet widely recognized, but which, within a period of five years, would be significant. The following priorities have been established for the research program:

1. Health delivery systems for mothers.
2. Health delivery systems for children.
3. The special needs of the pregnant adolescent girl.
4. The nutritional status of children in this country.
5. The health issues in group care facilities for very young children.
6. The utilization of paraprofessional health personnel.
7. The development of family planning as a component part of comprehensive maternal health services.
8. The evolvement of methodology and strategy for evaluation of health programs.

The changes in planning will occur largely within the framework of the research priorities identified above. The need for changes will emerge as the research program develops.

Bureau of Elementary and Secondary Education (BESE)

Several programs under BESE relate to early childhood research and development. These programs include Follow Through, Bilingual Education, and a large portion of programs under Title III.

The Follow Through Program, as an ongoing endeavor, is concerned, from a research point of view, with an evaluation of issues expressed by the following five questions:

1. What are the differences in school performance, intellectual functioning and personal-social develop-

ment between Follow Through children and non-Follow Through children and among children who have participated in different Follow Through models?

2. What components of Follow Through projects are causally related to impact on children's school performance, intellectual functioning and personal-social development, and what are the costs of these components?
3. What are the effects of sequenced, continuous experience based on the various Follow Through models on children's scholastic performance, intellectual functioning and personal-social development?
4. What are the relative effects of Follow Through models with "poverty," "near poverty," and "non-poverty" children?
5. What are the requirements and the difficulties of implementing each of the Follow Through models in new communities?

Question number five indicates a change in direction and suggests a rational sequence from program development, validation, and replication to dissemination of successful program models.

In terms of issues related to sample selection and instrumentation, the Follow Through program is addressing these four questions:

1. Does compensatory education (Follow Through) make any difference? (Direct effects on children is the first priority for investigation.)

2. What are the effects of cumulative (preschool/no preschool, one, two, or three years of participation) compensatory education?
3. What are the effects of different (five-ten reasonably distinctive) compensatory curriculum approaches?
4. Does a child's level of poverty interact with any of the first three questions?

Question number two suggests a logical shift in research concern. The cumulative effect of participation can be assessed only after the curriculum models have been operating over time. Thus, a new emphasis on the longitudinal aspects of Follow Through emerges.

Special issues of concern to Follow Through are expressed in the following three questions:

1. What are the effects of full year participation?
2. In what ways do Follow Through projects act as agents of change for the community-school?
3. What is the process and/or probability of replicating Follow Through models?

Each of these questions reflects a shift of emphasis in research concerns. Question number one suggests an attempt to lengthen the time of participation in a Follow Through Program to a full year. Question number two indicates a concern for the role of Follow Through as an agent for change beyond the classroom. And question three suggests the need to study as a separate problem the issue of replication of Follow Through models.

Bilingual Education continues to have as its major objective:

> The development and operation of new or proven bilingual education programs, services, and activities which meet

the special educational needs of children three and 18 years of age who have limited English-speaking ability and who come from environments where the dominant language is not English.

Bilingual programs are concerned with 19 languages, including Spanish, French, Portuguese, Chinese, Russian, Chamarro, and 13 American Indian languages. The plans of the Division of Bilingual Education are to:

1. Fund new demonstration projects in bilingual education.
2. Develop appropriate curriculum materials.
3. Develop appropriate teacher training programs.

Bureau of Education for the Handicapped (BEH)

The Division of Research in BEH has the following basic objectives for supporting research and related activities:

1. To identify, research, and demonstrate solutions to problems that are related to the education of handicapped children.
2. To develop, demonstrate, and disseminate innovative support systems and techniques to improve the performance of handicapped children and/or teachers and other practitioners serving the handicapped.
3. To create mechanisms that will produce the broadest possible diffusion, utilization, and implementation of the products of research and development.

Research relating to early childhood education will focus on the following activities:

1. The development and validation of curriculum for handicapped preschool children, including the identification of appropriate behavior to be learned at preschool levels and the special problems presented by handicapping conditions which prevent the attainment of such behaviors.
2. The study of program and systems organization (integration versus segregation of handicapped and non-handicapped students, categorical versus non-categorical programs, etc.) related to providing appropriate preschool educational service for the handicapped.
3. The organization of knowledge related to early identification of handicapped children, and developing knowledge related to educational diagnosis and programming.

New priorities in the Bureau's FY '74-'78 forward plans are the severely handicapped preschooler, the reform of labelling and placement practices, and the integration of health, education and rehabilitation services. These new areas will be emphasized in the ongoing research thrusts in early childhood education.

In addition to the research activities mentioned above, there are several other BEH-supported projects which relate to early childhood research:

1. An evaluation of the overall effectiveness of the BEH Handicapped Children's Early Education Program (HCEEP).
2. Validations of individual programs and techniques in early education, and subsequent replications of them in other settings. These efforts in dissemination of program models will continue to increase as the HCEEP program matures.

National Center for Educational Technology (NCET)

The research priorities of NCET, although greatly expanded in scope, remain consistent with FY '73 priorities:

1. The expanded development of children's television programs.
2. The continued and expanded efforts for local, state and regional applications of educational technology.
3. An increased evaluation of strategies for children's TV programs.
4. Coordinated efforts with other OE programs for children that make use of technological hardware and approaches.

National Institute of Mental Health (NIMH)

The research priorities of NIMH that relate to early childhood research and development are the following:

1. Intervention programs and applied research that will develop more effective and efficient methods of intervention in early child care through better use of basic research findings and appropriate evaluation of intervention effects; study of the relationships of the helping professions, social agencies and public institutions with families and communities, as these influence child development and the delivery of needed mental health services; and research on innovative methods (e.g., child advocacy program models) for developing and securing community, professional and institutional support for family care and education of children.
2. Ecological investigations of child development that will study child rearing and development, take into account the variety of social matrices in which the child develops, and also delineate the impact of interactive influences on the child's learning, feelings, and performance. Such influences include poverty, social class, youth culture, rural-urban differences, and minority group culture.
3. Nonintellective aspects of development that will investigate the processes of personality development; the affective aspects of development; the development of motives and values; the factors involved in the development of ego competence; adaptive coping mechanisms; the development of social values and social orientations; the interrelationships between intellective and nonintellective processes; and the positive,

integrative aspects of child development, such as imagination, creativity, and prosocial behavior.

4. Biological-behavioral research that will focus on problems of joint concern to the behavioral sciences and the biological disciplines, such as genetics, neurophysiology, and biochemistry. Included are the interrelations of physiological factors and behavioral manifestations at critical maturational stages of the child's development, and the genetic and environmental interactions involved in the development of such abnormalities as autism or childhood schizophrenia.
5. Baseline indicator research that will develop reliable information on the extent of childhood mental disorders in various segments of the population as well as changes in rates over time, and analytic epidemiologic investigations to provide information on why differences occur in the incidence of mental disorders.
6. Methodological research that will investigate methodological problems such as processes of gathering raw data, devising analytic procedures, and developing standardized instruments. To improve research methods, studies will focus on early screening procedures and the development of diagnostic and prognostic indicators.
7. Television and social behavior studies that will assess the effectiveness of sponsored select educational TV programs to teach parents the skills of better parenting.

8. Assessment and follow-up programs for minority groups to determine the impact of an intervention program conducted by the agency and the assessment of language development over a school year by use of a recently developed measurement instrument.

These research priorities are consistent with the general objectives of NIMH:

1. To foster the mental health of children by the improvement of early child care and education.
2. To increase the emphasis on family-centered approaches to prevention and remediation of emotional disorders and learning and behavior problems.
3. To increase the effectiveness of the community in providing comprehensive services to children.
4. To investigate the development of competence and independence in children.
5. To improve research methodology and assessment techniques.
6. To train high school and college youth to work with young children as well as retrain teachers.

Further, the research priorities are consistent with the more specific objectives NIMH has identified as a result of an intensive analysis of the agency's research:

1. To develop and implement a plan for analyzing the findings of completed basic and applied research on the child which is designed to accomplish the following goals:

   (a) the identification of child variables that might be criteria of the effectiveness of child care and education programs in fostering the optimal development of the child; and,
   (b) the identification of important areas for future basic research on the conceptualization, measurement, and investigation of child variables that are relevant to social adjustment and social competence.
2. To develop and implement a plan for analyzing and synthesizing the findings on basic and applied research on the family with a goal of developing recommendations for:
   (a) more specific, detailed, and comprehensive research on the total network of family relationships that influence child development--husband-wife, father and mother-child, and sibling relationships; and,
   (b) a program of action research on family care and education of children.
3. To take leadership in developing a program of basic research on the community and on the professions and institutions that relate to families and children.
4. To develop a program of research on the interrelationships between consumers of child care and

education services (children, families, and communities) and the professions and institutions that provide such services.

5. To develop a program of action research on innovative methods for developing community, professional and institutional support for family care and education of children and for developing family, community and professional/institutional collaboration in fostering child development.

Clearly, the last five objectives imply changes in planning; as the results of the separate goals are achieved, subsequent research priority decisions will be made. A special fact should be reemphasized: NIMH increasingly is moving into applied research in the field.

National Institute of Child Health and Human Development (NICHD)

NICHD, after several years of studying its work as initially organized, decided on three major areas of emphasis: (1) population studies; (2) child health; and (3) aging. It is child health that is of concern here. The objectives for research under child health have become and continue to be as follows:

Child Health

1. Perinatal Biology and Infant Mortality
    - (a) Pregnancy and maternal health
    - (b) Embryonic development (including developmental pharmacology)
    - (c) Low birthweight
    - (d) Infant morbidity and mortality
    - (e) Respiratory distress syndrome
    - (f) Sudden infant death syndrome

2 Mental Retardation

(a) Epidemiology and the etiology of mental retardation

(b) Cytogenetics

(c) Inborn errors of metabolism

(d) Prevention, early diagnosis and management

3. Growth and Development

(a) Physical growth and maturation

(b) Behavioral, cognitive, and social development

(c) Nutrition

(d) Adolescent development

(e) Prevention of accidental injury (in childhood, in adolescence, and in the aged)

(f) Developmental immunology

(g) Developmental pharmacology

The research is primarily basic research and consequently is concerned with adding to knowledge. The shifts in research will emerge largely as a result of research findings and the new questions posed by the findings.

National Institute of Neurological Diseases and Stroke (NINDS)

NINDS reported one major study, the Collaborative Perinatal Research project. This study is longitudinal in nature and, because of its concern with children, is highly relevant to the concerns of early childhood research and development.

The project is a comprehensive, prospective investigation of women during their pregnancies and the subsequent development of the children born of these pregnancies. Monitored and recorded are the events and complications of pregnancy, labor and delivery, which may contribute to a variety of neurological disorders. The observations on some 55,000 women during their pregnancies were made during the years from 1959 through 1966 at 14 collaborating, major medical centers distributed throughout the United States. Data collected at these major medical centers have been submitted to the Perinatal Research Branch, National Institute of Neurological Diseases and Stroke, which has been responsible for coordinating the program and is responsible for analysis of the data. The current major emphasis is on the follow-up examinations of children at seven years of age, which include neurological, psychological and visual screening examinations and an evaluation of the socioeconomic environment in which the children live. At eight years of age, there is a detailed assessment of speech, language and hearing. The evaluations at ages seven and eight are designed to identify specific neurological problems, including subtle defects of the nervous system, such as, learning disabilities and minimal brain dysfunction. Data collection for the program will be completed in fiscal year 1974. The data, on an ethnic basis, represent about 25,700 white, 25,800 Black, 3,700 Puerto Rican, 250 Oriental and 300 other Study registrants. The population is mainly urban.

Following completion of data collection, the next phase of the study, to be carried out in FY '74 through FY '76, will put the major emphasis on data analysis and production of reports for publication. Basic analyses to be completed in FY '76 are tentatively planned for the following primary areas: (1) cerebral palsy, (2) mental retardation, (3) communicative disorders, (4) vision, (5) convulsion, (6) learning and education disorders, (7) minimal brain dysfunction, (8) neuropathology-epidemiology of death, (9) birthweight-gestation, and (10) congenital malformation.

Office of the Assistant Secretary for Planning and Evaluation (OASPE)

OASPE does not tend to establish definite plans for evaluation; rather, it negotiates with each agency within DHEW to determine what evaluations are needed that cannot be conducted by the agencies. Evaluation studies which involve more than one agency or which involve other departments of government are more easily conducted by OASPE. No plans for evaluation that incorporate early childhood are formulated presently.

Office of Economic Opportunity (OEO)

OEO, after reassessing in FY '72 its responsibility for continuing support of research for Head Start, discontinued that support and focused on day care and parent education as two major areas relating to early childhood research and development. The research effort since FY '72, then, rather consistently adheres to the following research objectives:

1. The examination of policy issues arising from the day care provisions of the Welfare Reform proposals, including:
    (a) assessing the effects of different kinds of child care situations on child behavior development; and,
    (b) determining the dimensions of demand for day care of different types.
2. An assessment of the impact of housing location on child development.
3. The evaluation of the feasibility of expanding the channels of choice available to parents in day care through the voucher system.
4. The study of research methodology that will permit criterion-based program evaluation.
5. The continuation of three parent and child development centers.

6. The continuation of four major day care demonstration programs.

The United States Department of Agriculture (USDA)

The Department of Agriculture, one of the agencies to join the Interagency Panel in the fall of 1972, has been conducting research in a number of areas where nutrition is an important factor. The continued work, with some new emphases, on the study of the delivery of nutrition care, the effects of maternal and child nutrition on pre- and post-natal child development, and the impact of maternal and child health programs, is described as follows.

The Agricultural Research Service (ARS) of the Department of Agriculture conducts a variety of research with the general goals of improving the dietary situation, the nutritional health, the levels of living, and the home management practices of families and individuals in the United States. Much of the program is oriented toward foods and nutrition. Basic information is developed to assist the conservation and optimum use of food resources to promote the nutritional well-being, health, and personal satisfactions of all people in the nation.

A major focus of this research is to obtain information on human requirements for nutrients and the ability of various foods to provide these nutrients. The goal in this research is to provide a sound basis for dietary recommendations for normal individuals throughout their lives. One of the high priority risk groups in these studies includes the infant and young child. The studies of this group will attempt also to identify the individuals or the groups of individuals in the early childhood age group who could benefit by an alteration or regulation of their dietary intake of various nutrients, to find out how these should be regulated, and to assess the potential benefits from dietary change.

The ARS also has the responsibility for nationwide food consumption studies, not only for different population groups but among individuals of the same group. The nutrients and the foods consumed by children under one year, one to two years, three to five years, and six to eight years of age are assessed separately in these studies. Research based guidance materials are developed that relate to food budgets, dietary guides, and other aids to help families obtain better diets and make the most advantageous use of their monetary and time resources. Food budgets for families at different income levels and with children at preschool ages are developed, along with the more specific budget requirements for the children themselves.

The Food and Nutrition Service (FNS) conducts studies and surveys as well as nutrition education and training for the Child Nutrition Program of the USDA. Their studies include methodology to increase the effectiveness of Child Nutrition Programs, evaluation or assessment of the impact of various Food Distribution Programs, and the testing of new means of improving these diets for children. Projects include evaluation of various new foods and food service delivery systems, food acceptance and pilot studies on nutrition education for preschool children.

The Department of Agriculture supports research also through the Cooperative State Research Service and the Extension Service: the specific, common objectives of cooperative state-Federal research in agriculture and forestry are:

1. To solve local, regional, and national problems affecting agriculture, forestry, and rural life.
2. To provide scientific expertise to local, state, and Federal government agencies and private

organizations.

3. To provide the scientific expertise and research in support of programs that relate to foreign nations.
4. To provide a continuing flow of new knowledge essential to the solution of current and future problems.

The Extension Service is the educational agency of the Department of Agriculture. It is one of three partners in a cooperative Extension Service. State governments, through their land-grant universities, and county governments are the other partners. All three share in financing, planning, and conducting Extension's educational programs.

Extension helps the public learn about and apply to everyday activities the latest technology developed through research by the land-grant universities, the Department of Agriculture, and other sources. Major areas of assistance are agricultural production and marketing, home economics and nutrition, 4-H youth development, rural development, and early childhood education. The Extension Service has over 25 state projects relating to early childhood education including child care, day care, nutrition and early learning and development. Programs are planned to be continued in these general areas in FY '73.

Agencies with Emphasis on New Plans

Social and Rehabilitation Service (SRS)

The areas of research to be supported by the Division of Child Welfare Research and Demonstration of SRS include the following related to early childhood research or development:

1. Incentives to remove barriers to adoption.
2. The deinstitutionalization of children.

3. Barriers to family care for children.
4. Total family stimulation.
5. Termination of parental rights; an alternative step toward awarding interminable foster care for children.
6. Study of the effects of delinquency prevention programs on children from welfare families and children from poor families not receiving public assistance.

Numbers one and three are planned for one or two years beyond FY '73 and will need to be supplanted by new research efforts after FY '74 or FY '75. Numbers four, five and six, on the other hand, are new research starts for FY '74 and will continue at least through FY '76. The agency, then, is moving in new directions that reflect the new emphasis of the government to reduce institutional dependency. Total family stimulation is, in effect, an effort to move families more into self care than institutional care. Number five is in response to a growing problem of termination of foster parents' [illegible] as maternal parents attempt to reclaim their children. The effects of these issues on children will be studied. Number six reflects the increased concern for the impact of welfare on children as this affects later development: it asks, essentially, does a delinquency prevention program for children differentially affect children from welfare families and those children from poor families not on welfare?

Office of Education

The principal programs transferred from the Office of Education in FY '73 that are concerned, at least in part, with young children are:

1. Programs of the National Center for Educational Communication to support: (a) a national information system providing access to research and development

literature (ERIC); (b) the preparation of summaries and analyses of current knowledge and practices; and, (c) the development of alternative means of delivering current knowledge and practice to the field.

2. The Experimental Schools Program which will provide a unique opportunity for five-year testing of comprehensive alternatives to present educational practices, procedures, and performance. By supporting a limited number of such large-scale experiments with a major focus on documentation and evaluation, this program will serve as an effective bridge from research, demonstrations, and experimentation to actual educational practice.
3. Other programs to be transferred from OE include Institutional Support, Training Research, Handicapped Research, and other smaller research programs.

Most of the transfer programs listed above will be completing their present scope of work during the years 1974-1978, and will receive greatly decreased funding by 1978. The major exception is programs of the National Center for Educational Communication which are likely to receive increased funding over the years 1974-1978.

Office of Child Development (OCD)

While OCD is engaged in continuation studies, it has shifted its priorities away from preschool children's centers to families, and away from traditional services to advocacy. In addition, it has redirected its concern for cognitive development to a focus on the socialization of young children, and its interest in the individual to the individual interacting with other persons and institutions in the larger community. Social ecology is new to OCD research planning and advocacy is receiving increased attention. OCD has described its areas of concern, including the new areas and new emphases, as follows:

1. Strengthening the family
    - (a) The determination of whether or not parenting skills education projects increase young parents' commitment to, and ability in, home child rearing during the first years of life;
    - (b) the predication and prevention of family breakups involving children under six;
    - (c) demonstration projects directed toward child development support for the mid-marriage breakup phenomenon that is rapidly increasing; and,
    - (d) preparation for parenthood for parents of preadolescent and adolescent children.
2. Advocacy, service coordination and state/Federal coordination
    - (a) experimental tests of the costs and benefits of service coordination versus direct increases of funds or reallocation of funds;
    - (b) the development of a uniform child welfare needs/resources system;
    - (c) the dissemination of successful examples of advocacy, resource creation, and multiple or unified fundings;

(d) the development of state/regional/Federal consortia for child welfare and early child development; and,

(e) the development of demonstration models of private sector/public sector coordination in child welfare planning and child welfare programs, particularly in the area of day care, and the strengthening of family life.

3. Adoption, foster care and father absent families

   (a) demonstrations of ways of reducing barriers to adoption, both in the interpretation of existing "codes" and through programs such as subsidized adoptions;

   (b) demonstrations of recruiting, training and support of foster parents; experimental studies of private and profit-oriented foster care administration; demonstrations of foster care support for the difficult-to-place child;

   (c) demonstrations of ways to strengthen the development of children in single parent families, including experimental studies of income supplementation;

   (d) demonstrations of ways to strengthen the development of children in functionally father-absent homes (e.g., fathers who are absent for extended periods of time due to work habits, military service, illness, etc.); and

(e) demonstrations of ways of strengthening family life in maximally at-risk father absent homes, particularly those where one or both parents may be in jail.

4. Studies of vulnerable children

   (a) the demonstration of coordinated state/Federal approaches to upgrading children's institutions through (1) identifying and providing alternate care for the estimated 60 percent of currently institutionalized children who do not belong in institutions, and (2) establishing monitoring/follow-up systems to prevent child abuse in institutions;

   (b) the development of models for feasible provision of emergency services in all communities;

   (c) the development of approaches to meeting child welfare needs in communities in financial crisis that are unable to meet other community needs, and,

   (d) demonstration programs on the prevention and treatment of child abuse.

5. Day care

   (a) demonstrations of feasible approaches to after school care through existing or newly created institutions;

   (b) experimental studies of the feasibility/costs and effects of child care provided under various auspices (public schools, industry, hospitals, private sector, special purpose agencies);

(c) demonstrations of child care worker and child care administrator training and supervision; studies of different supervisory/administrative models in family, group and center based care;

(d) studies of existing day care provisions (e.g., through Title IV A, WIN, Model Cities); cost/effectiveness and regulation of delivery systems;

(e) development of Federal/state/local systems for monitoring the quality of child care for children of mothers who must work and for following up to correct problems; and,

(f) studies of the effectiveness and cost of providing child care for children of mothers in multi-child families. Questions to be explored include: What is the number of children for which it is more cost/effective to provide income supplements than to pay day care services in multi-child families? What are the longer-term psychological benefits to the family that result from the training and experience received by the working mother that may offset the potentially higher direct cost relative to the probable low initial salaries? For what level of training and experience (and what kind of an economic job market) is day care cost/effective for the multi-child family?

6. Social ecology
    (a) studies of the effects of different kinds of welfare and social support on self/other/community attitudes including the differentiation of those types of welfare which foster attitudes and expectancies that create cycles of dependency from other kinds may help create attitudes leading to independence, self-reliance, social responsibility and pre- post-social behavior;
    (b) demonstrations of constructive heterogeneity in preschool and primary school ages;
    (c) research on contemporary ethnic/social class attitudes; effects of urban renewal; employment equality; and ethnic equality on TV and the media on racial/social class attitudes in the '70s; and,
    (d) studies of the development of awareness, social concern and social responsibility versus the legitimization of violence, indifference or fear of involvement in interpersonal needs or intergroup conflicts.

National Institute of Education (NIE)

NIE, a newly created agency whose concerns include early childhood research and development, will be making major shifts from FY '73 to FY '74-'78. In FY '73, nearly 70 percent of the NIE budget will support activities initiated in OE. As the Institute's budget grows during the years FY '74-'78, and as work under several of these OE-transferred programs is completed, NIE's budget will reflect an increasing support of

NIE-initiated activities. By 1978, 75 percent of the NIE budget will support such activities.

NIE-initiated activities will be undertaken in several areas relating to early childhood research and development, and will encompass an increasingly greater amount of the NIE budget during the years FY '73-'78. Probable areas for new initiatives relating to early childhood are listed below:

1. Program planning in which the Institute may pursue a program of intramural awards to analyze alternative educational policies and develop new program ideas to implement those policies. These efforts will become a keystone for the growth of the Institute.
2. The development of new measures as that research may be conducted to produce measuring techniques which (a) do not discriminate against minority groups; (b) measure accomplishments in problem-solving and social relationships; (c) measure the effectiveness of educational institutions; and, (d) generally provide better data on which to base resource allocations.
3. Self-directed education that includes the development of instructional techniques and materials to (a) allow educators to more nearly match an individual student's learning style and interests with his instructional program; (b) permit the student to actively explore those subjects of interest to him, thereby increasing his motivations to learn; and (c) develop the student's ability to continue his education independently.

4. The development of productivity -- techniques that will provide more and better educational services at moderate costs and, thus, increase educational productivity. Research in productivity will focus on both improving the ability to define and measure "productivity" and identifying curricular, organizational, and staffing innovations that will increase productivity.
5. Activities in equal educational opportunities that will focus on three critical research areas: (a) research to determine "what is needed" in compensatory education; (b) research to determine "what works," and, (c) the development of programs "that work" to address "what is needed."
6. Activities in educational administration and management designed to explore alternative ways of organizing and governing educational institutions to facilitate: (a) the effective and efficient allocation of resources; (b) the effective and efficient delivery of services; and, (c) the examination of the role of non-administrators in the decision-making process.
7. Other issues which are scheduled for examination by the Institute include: (a) curriculum development; (b) teacher training; (c) non-school based educational alternatives; and, (d) research on alternative means for putting research knowledge into practice.

National Center for the Improvement of Educational Systems (NCIES)

NCIES, a newly established agency in FY '72, has incorporated the activities of the former Bureau of Educational Personnel Development, Early Childhood Training Program (BEPD). While the Early Childhood Training Program is being phased out and a few projects are receiving continuation and termination support only, the concerns for such training and personnel development will be incorporated in NCIES. The tentative goals of NCIES are:

1. To provide more responsive systems to meet educational needs by promoting alternatives to and pursuing significant improvements in and modifications of existing forms of education.
2. To exert leadership in innovation by providing developmental assistance to educational organizations to improve and reform educational systems and institutions.
3. To accomplish through the redirection of continuing projects and the development of new projects substantial acceleration of the installation and use of promising products, practices, and processes.

These statements of plans and emphases of the various member agencies for FY '73 revised plans and FY '74-'78 forward planning fall quite easily into the categories of research effort shown in Tables 8 - 11. Tables 8 and 9 indicate general areas of research concerns for FY '73 and FY '74-'78, and are quite consistent with each other. Tables 10 and 11, however, reflect shifts in emphases in terms of "increased," "decreased," "the same as previously," or "no activity." An examination of Tables 10 and 11 permits a different view of the research efforts of the member agencies, one in terms of relative emphases. The next section presents such an examination.

Section 3: Research Emphases of Member Agencies

The seven broad research areas that are of major interest to the Interagency Panel are shown in Tables 10 and 11. More specific research issues or concerns are identified under each research area. By examining these Tables in terms of the agencies' adjusted plans and increased efforts, it is possible to derive other than descriptive information. Further, by comparing the increased effort for FY '73 with that for FY '74-'78, it is possible to highlight the directions in which the member agencies are moving. These directions can be seen clearly by analyzing the specific research issues or concerns under each of the broad research areas in terms of three or more agencies increasing their efforts from the appropriate base year (as indicated by the symbol + in the Tables).

Using FY '72 as a basis for comparison, the FY '73 revised plans show that the following areas are receiving increased emphases by three or more member agencies (see Table 10):

I. Developmental Process
  B. Social and Emotional Development
    5. Motivation
  C. Physical Development
    5. Effect of maternal drug abuse on newborn children
II. Effect of Primary Environmental Influences
  D. How family characteristics (e.g., size, stability, cultural values) affect child development

III. The Effect of Community and Broader Social Programs
  A. Impact of day care experiences -- for better or worse -- on child development
  C. Effects of parent involvement on day care and preschool education
  D. Training needs for day care staff
  E. Long-range effects of various day care and preschool program characteristics
  F. Impact of day care health services
  I. Innovation in the delivery of nutritional and health care
  J. Coordination of medical services
  O. Alternatives to day care and compensatory education programs
    1. Parents as teachers
    4. Combination of home and day care centers
  S. Child advocacy programs
IV. The Global Approach and Combined and Comparative Effects
  A. Whole child, i.e., the child as a total entity
  B. Total life space; ecological studies
  C. Comprehensive programs or settings (effects of combinations of elements in primary environment)
V. Research to Benefit all Children
  D. Which different combinations of programs will benefit children with different backgrounds and home environments
VI. Research on Methodology

B. Program evaluation methods which measure the relation of specific inputs to performance

D. The refinement and development of techniques of carrying out behavioral observations in natural ongoing situations

VII. Study of Research Planning and Dissemination

A. Conferences or studies relating to Federal research goals

B. Studies of diffusion, dissemination and utilization of research results

Except for an increased emphasis on motivation, the FY '73 revised plans show a marked increase from FY '72 only in the area of "the effect of community and broad social programs" on children. This, together with the increased emphasis on the "global approach" to studying the child as well as research on "combined and comparative effects" of programs on children, suggests a greater awareness of the need to study children in new ways; i.e., a total child in a total setting. The inevitable requirement for new emphases in methodological problems accompanies the new perceptions of needed research approaches. It is the FY '74-'78 forward planning, however, which reveals even more dramatically the influence of new ways of approaching research as well as increased concerns for specific areas of study.

Using FY '73 revised plans as a basis for comparison of degree of emphasis, the FY '74-'78 forward planning shows that the following areas are receiving increased emphases by three or more member agencies (see Table 11):

- I. The Developmental Process
  - A. The Development of Cognitive Ability
    - 3. Cognitive skills development in infancy
  - B. Social and Emotional Development
    - 5. Motivation
    - 6. Intervention strategies for infants
  - C. Physical Development
    - 3. Effects of maternal and child nutrition
    - 5. Effect of maternal drug abuse on newborn children
- II. Effect of Primary Environmental Influences
  - A. Effect of urban, suburban or rural life on the young child
  - B. Specification of what ghetto and slum living means to children's physical and mental development
  - C. How global environmental variables are mediated to the child through more proximal agents
  - D. How family characteristics (e.g., size, stability, cultural values) affect child development
  - E. Changing role of the family in U.S. society and its effects on children
  - F. Impact on children of the formal learning situation of the schools compared with learning at home
- III. The Effect of Community and Broader Social Programs
  - A. Impact of day care experiences -- for better or

worse -- on child development

- B. How various amounts of separation from home affect children of different ages
- C. Effects of parent involvement on day care and preschool education
- D. Training needs for day care staff
- E. Long-range effects of various day care and preschool program characteristics
- F. Impact of day care health services
- G. Impact of maternal and child health programs
- H. Impact of programs for handicapped and mentally retarded children
- K. Studies of effective program elements in Head Start, Follow Through, compensatory education programs
- L. Training methods which will make effective skills available to early childhood teachers
- M. Training methods which will make effective child-rearing and instructional skills available to parents
- O. Alternatives to day care and compensatory education programs
    - 1. Parents as teachers
    - 3. Training teens for parenthood
    - 4. Combination of home and day care centers

IV. The Global Approach and Combined and Comparative Effects

- A. Whole child, i.e., the child as a total entity
- B. Total life space; ecological studies
- C. Comprehensive programs or settings (effects of combinations of elements in primary environment)
  - 3. Comprehensive, validated child care and education models for preschool-age-children
- D. Combined and/or comparative effects of social programs

V. Research to Benefit all Children

- D. Which different combinations of programs will benefit children with different backgrounds and home environments
- F. Measures of adaptive behavior which take into consideration the unique life style and culture of different ethnic and social groups
- G. Curricula for specific kinds of ethnic groups

VI. Research on Methodology

- A. Program evaluation procedures for analyzing complex situations containing many variables
- B. Program evaluation methods which measure the relation of specific inputs to performance
- C. Systems to insure that the criteria used to measure success are relevant to program characteristics
- D. The refinement and development of techniques of carrying out behavioral observations in

natural ongoing situations

   E. Methodology of longitudinal research

   F. Improving measures of young children and infants

VII. Study of Research Planning and Dissemination

   A. Conferences or studies relating to Federal research goals

   B. Studies of goals for child development

   C. Studies of diffusion, dissemination and utilization of research results

Some member agencies intend, then, to move in the direction of research on infancy, including intervention strategies, cognitive skills development, effects of nutrition and maternal drug abuse. This shift is consistent with present national concerns for day care and for the present limited amount of information on programs for infants.

The shift toward examining the effects of primary environmental influences is global and includes six of the nine specific areas identified. This change is consistent with the increasing realization that one intervention endeavor, for one service, or one aspect of studying a child is insufficient for understanding either child development or any varying intervention results.

The shift toward studying the effects of the community and broad social programs on child development again reflects an awareness of the many factors in a child's life and environment that effect his development. The generally increased effort planned in studying the child, by a global approach, as well as examining the combined and comparative effects of programs on children, is consistent with the increased awareness of a need to study the total child in his total environment.

The areas of Research on Methodology and Study of Research Planning and Dissemination are receiving increased attention in each specific issue or concern. Not only do the problems in these areas persist, but new methodologies, new research planning mechanisms, and new dissemination strategies are needed to meet the demands for new ways to study children and new ways to affect their development.

CHAPTER III

TOWARD THE FUTURE: TASKS OF THE INTERAGENCY PANEL

The activities of the Interagency Panel on Early Childhood Research carried out since its first report was published in October, 1971, may be summarized as follows:

1. Refinement of the information classification system;
2. Publication of papers and surveys addressing themselves to gaps, needs, and the status of research on early childhood;
3. Addition of three Departments (Labor, Agriculture, and Housing and Urban Development) and the newly established National Institute of Education to the membership of the Interagency Panel;
4. Provision of final funding information for FY '72;
5. Sharing of current FY '73 and forward planning (FY '74-'78) information;
6. Preparation of the present document which synthesizes and analyzes the information provided, and identifies new needs, new gaps, and continuing research issues.

The implications of these activities are far-reaching. They assure a broader base for planning and coordinating Federally funded research in early childhood development both in terms of the increased Panel membership and the additional planning information provided by member agencies. Further, the Panel's refined information classification system permits a deeper analysis of research data already in the information system. The papers and surveys highlight research needs and are used by the agencies, along with the other information provided, to make planning decisions relating to early childhood research and development. The Interagency Panel, however, continues to explore new ways to facilitate interagency coordination and planning for early childhood research.

New Approaches to Coordination

While the Interagency Panel will continue to share information and utilize the mechanisms already established to facilitate interagency coordination of early childhood research, it is involved in a number of new activities which are expected to further continue the work of research coordination. These activities are identified and discussed briefly as follows:

1. Linkage with newly established Interagency Panel for Research and Development on Adolescence. This Panel was formally established in October, 1972. It will address itself to the problem of interagency coordination of research and development much as does the Early Childhood Panel. The linkages between the two Panels will consist of: (a) sharing the information system and modifying it to accommodate the new classifications for data on adolescents; (b) extending upward the age of focus from eight through age nine for the Early Childhood Panel and extending downward to age 10 the focus for the Panel on Adolescence. The two Panels will have periodic joint meetings, share documents, and examine the research field more comprehensively.

2. Special interest area meetings. A series of meetings are to be held on special interest areas to which member agencies are making research funding commitments. The pattern for the meetings is to select a special interest area (e.g., home focused programs, longitudinal/intervention research, etc.), and to invite those agencies involved with the special interest area. All members of the Interagency Panel may attend and bring other interested and concerned persons from their agencies. Information concerning ongoing and planned research in the special interest area is provided to and by the participants for sharing and discussion. Initial meetings may be followed up by other meetings with special interest groups to be invited to provide further information. The goal of these efforts is to assist agencies in continuing to move toward greater coordination of research planning and support.
3. De novo focus on the family. The Interagency Panel is addressing itself to the theme of The Family as a guide for considering research planning and coordination of the member agencies. The Panel will examine current and planned efforts of the agencies as well as approach the issues relating to The Family from a fresh conceptual level. A series of conferences,

position papers, descriptions of funded research, etc., will comprise some of the activities leading toward an overall plan for coordinated research of the member agencies concerned with The Family.

4. Establish linkages with non-Federal research sponsors. The Interagency Panel continues to examine non-Federal research efforts in the field of early childhood development to determine areas of focus and is increasingly relating these efforts to Federal planning and activities. It plans to establish linkages with organizations and professional groups involved with non-Federal research so that there will be a broader sharing of information. The mechanisms for this effort need to be worked out.

The continuing and ultimate goal of all these efforts is to assure that the nation's children will benefit by the most effective allocation of Federal research resources, an allocation that will yield the most relevant research information about the development of young children.

Appendix A

Summaries of Major State-of-the-Art Studies
Prepared for the Interagency Panel

A Preliminary Report on The Present Status and Future Needs in Longitudinal Studies in Early Childhood Research and Demonstration

Prepared by Joyce Lazar, M.A.

This report presents a brief literature review on several types of longitudinal studies relevant to the field of early childhood research and examines some of the findings in order to identify gaps and future needs. The major focus is on longitudinal studies conducted or funded in fiscal years 1970 and 1971 which have been reported by member agencies of the Interagency Panel on Early Childhood Research and Development. These Federally funded studies include research in a number of areas: normal as well as abnormal physical growth; atypical psychological development; cognitive and social-emctional development; and, assessment of various intervention programs.

Noting the relative lack of long-range studies which follow the natural development of children prenatally through maturity and the need for developing and using new measurement instruments and data processing techniques, the report recommends that new long-term studies be conducted to provide information in the many areas. Some of the recommendations are as follows:

- Study of the relationship between environmental characteristics, including pollutants, and the biological and psychological development of children.
- Continued examination of the relationship between genetic and environmental variables on the physical, cognitive, and psychological development of representative samples of children.

- Continued exploration of the biological correlates of behavior, including effects of prematurity, low birth weight, nutrition, etc. on the whole developmental process.

- Study of cognitive development in a broader theoretical framework, including its relationship to genetic factors, prenatal and early infancy environmental variables, family constellation interactions and various possible cultural, subcultural and ethnic differences in genetic, environmental and familial factors.

- Increased study of the characteristics of successful learning situations, learning styles and processes.

- Exploration of new technological developments and their relationship to learning among children of all ages.

- Study of the life span social-emotional development of "normal" as well as disturbed children with emphasis on determining the stability of many "traits" as well as "general adjustment."

- Development of techniques to observe and measure interpersonal interactions more complex than dyads, especially total family interaction patterns.

- Study of the effects of peer groups on the cognitive and social development of children of all ages.

- Study of how children learn to cooperate, pursue mutual goals and work as a group and for the group.

- Continual development of instruments for measuring cognitive development which are culture-fair as well as instruments to measure and assess social-emotional development at the earliest stages and throughout childhood.

- Development of instruments to measure the various discrete stages which take place in the growth of children.

- Interagency funding of multi-disciplinary projects which will gather data in various locations on representative samples of children.

- In the area of preschool intervention, studies are needed to determine the optimal times for specific types of interventions; the impact of all program components upon children and their parents; the effects of parent participation in decision-making upon the parents themselves, the community and the children involved; and, any possible negative effects which the intervention program may have upon children, parents, and the community.

Early Childhood Research and Development Needs, Gaps, and Imbalances: Overview

Prepared by Judith Chapman, Ph.D.

This report presents a moderately detailed overview of needs, gaps and imbalances in early childhood research and development, as determined from several state-of-the-arts papers and the research activities and plans of agencies participating in the Interagency Panel on Early Childhood Research and Development.

The paper covers five dimensions of research and development: 1) kinds of research and development (basic, programmatic, evaluation, methodological, dissemination and planning); 2) research scope (longitudinal research and population sampling); 3) developmental process areas (cognitive, social-emotional and physical development as well as the "whole child"); 4) environmental influences (national, international, familial, social institutions, total life space, etc.); and 5) population characteristics (age, sex, socioeconomic status, ethnicity, geographic location, etc.). Problems in each of these areas are discussed both from a unidimensional and a multidimensional point of view. A number of recommendations are made related to early childhood research. These are listed here under several broad research areas in need of further study.

General research goals need to include:

- Increased cooperation and coordination between applied and basic research efforts.
- More collaborative research efforts.

- Conceptual integration, as by synthesis of research findings and more comprehensive theory.
- Improved dissemination of research results to other researchers, program people and the public.

Research on environmental factors needs to include:

- Longitudinal studies of development and the effects of environmental influences, including the effects of applied programs.
- Study of the development of and environmental influences which affect individuals below three years and in the middle years of life, females, those from middle and upper income backgrounds and those of average and above average abilities.
- Study of the effects of rural, urban and suburban environments.
- More emphasis on implementing environmental change in addition to efforts directed toward effecting changes in behavior.

Research on intervention programs and social services needs to include:

- Multi-faceted intervention programs and different combinations of program facets.
- Study of the impact on child development of programmed and naturally occurring environmental change.
- Ecological study of applied programs and natural settings.
- More flexible evaluation schedules and techniques in applied programs.
- More analysis of contingencies between environmental events and behavior in applied programs and in natural settings.
- More consideration of individual differences in the development and analysis of applied programs.
- Study of the latent, unintended and potential harmful effects of applied programs.
- Study of the effects of helping organizations on clients.

- Further study of the effects of day care on children and families.

- Further development and assessment of child advocacy programs.

Studies of learning and cognitive development need to include:

- Clarification of the components and sequential steps of cognitive development and the precursors of these components and steps.

- Clarification of the subprocesses of learning and thinking skills and identification of the optimal learning situations for various skills.

- Clarification and validation of the objectives and standards of education.

- Research on how the goals of education might best be broadened.

- Study of the relationship between school practices and tests and extra-school demands.

- The development of measures of the learning process, including measures of various problem-solving skills and attitudes.

- Further development and use of individualized instruction.

- Study of the effects of educational technology, including programmed learning, computer-assisted learning and TV.

- Further development of training and selection procedures for teachers and child care workers.

Studies of social-emotional development need to include:

- Determination of the norms of social-emotional development.

- Research on the situational generality, stability over time and changeability of social-emotional characteristics.

- Study of the development of values.

- Study of the role of play and pleasure in development.
- The development of additional measures in the social-emotional domain.
- Detailed study of social interaction processes, including those within social systems of more than two persons.
- Increased study of the development of sexual identity.

Research on the physical aspects of child development needs to include:

- Heritability studies on developmental measures within and between various population groups.
- Study of genetic variation and aberration.
- Further study of the relation between nutrition and cognitive development.

Research on children and their families needs to include:

- Study of the effects upon children of separation from their parents.
- Study of the effects of the family on child development, including families of various forms.
- Further development and study of parenthood training.

Research on children's interaction with peers and experimenters needs to include:

- Study of the effects of peers on child development.
- Study of experimenter effects upon children's behavior.

Research on disadvantaged and ethnic minority groups needs to include:

- Study of the heterogeneity of the disadvantaged population.
- Study of successful individuals from apparently disadvantaged backgrounds.

- Study of how to increase the ethnic relevance of educational and social programs.
- Study of the effects of socioeconomic and/or ethnic mix.
- Study of the relation between integration and cultural identity.

Research on all children needs to include:

- Assessment of the whole child.
- Study of the total life space of the child.

The Status of Research in Children's Television

Prepared by Ellen Searcy, M.A. and Judith Chapman, Ph. D.

This report concentrates on television research relating to young children that has been conducted in the United States, particularly Federally supported studies. Brief reviews are presented of Federally funded and planned research programs and of selected state-of-the-arts documents which include both Federal and non-Federal efforts. A comparison is made between research needs and actual supported research efforts to identify probable gap areas in children's television research. A large number of recommendations are made in several substantive areas, such as the impact of television of child development, viewing habits and their effects, the content, programming and presentation of television material, the development of television programs, transmittal systems and technical problems, the effects of "how, when and where" television is used and the study of all these factors in relation to different subpopulations. Other recommendations center around research planning and evaluation and policy making issues.

Some of the recommendations are synthesized below.

- Interdisciplinary research is needed to further determine the effects of television on the cognitive, social-emotional and physical development of children, particularly of infants and preschool children. Such research needs to include questions about the needs of children which TV satisfies and the ways in which TV viewing intermeshes with other environmental influences to produce certain behavioral and developmental results.

- Further research is needed on the viewing habits of children and their parents, including parents' opinion about television as a force in their children's lives; the effect of parental versus children's control of TV watching; the effects on children's viewing habits of such factors as parental interests and the educational environment of the home; the effects of TV viewing on family life and family interaction; and, the most desirable mix of TV with other available activities for children.

- In the area of content, programming and presentation, more analyses are needed of the effects, function and control of advertising on children's programs and on the interaction effects of entertainment and instruction in program content. More research is needed also on more effective ways of presenting content, including format, spacing, duration, and the use of animation, fantasy and live characters.

- Experiments are needed to determine the best uses of different types of transmittal systems and the implications of two-way communications on the cognitive, social and physical development of children.

- Research is needed on the impact and effectiveness of television in combination with a variety of other influences, such as the use of other mass media materials and human intervention.

- In the area of research design, greater attention is needed on how projects might be properly evaluated, that is, ways in which investigators might best determine whether or not program objectives have been met and the various causes of the effects being studied. Such problems are particularly relevant to naturalistic studies that attempt to determine the effects of television viewing upon children in their real life setting. Some of these problems, of course, await the development of better theory as well as better methodology.

- In viewing television research in terms of policy making, the report addresses a number of questions to researchers. For example, it asks how and to what extent research can be the arbiter in future policy making in the area of social needs. It also asks how the results of research can be made more useful to policy makers and other potential users. This raises the important issues of the need and the means for utilizing research results, of disseminating research findings in ways that explain how they may be applied. More specific questions also are raised, such as the possible social and policy issues associated with the use of cable television and the consequences which cable TV may have upon family and community life and the life of the Nation.

A Review of the Present Status and Future Research Needs of Programs to Develop Parenting Skills

Prepared by Joyce Lazar, M.A. and Judith Chapman, Ph. D.

This report reviews recent studies involving various types of parent education among both middle class and economically deprived families. The review is focused mainly on Federally funded research studies, including those with final reports available, those with interim findings only and those which have been funded and are in the process of development. Findings, issues and gaps are discussed in relation to three types of parent education programs: omnibus programs that provide more than one type of service to children and their families; parent-oriented programs in which training of parents is done through home teaching programs, use of mass media, group discussion techniques, parent education for adolescents, use of parents as staff, and/or parent education in pediatric and health facilities, and, child-oriented programs which, although focused mainly on the child, include parent training components to help parents become involved in program decision-making, enhance their child's cognitive development, use behavioral modification techniques, and/or increase home-school communication and understanding. Somewhat extensive recommendations are made in each of the areas reviewed. Some of the more specific issues, needs and gaps are presented below.

- There is a need to monitor ongoing parent education projects to examine the processes used to achieve objectives.
- There is need to examine the kinds of programs which are effective in involving different kinds of parents.

- There is need to determine the frequency and duration of each type of program to achieve and sustain specified outcomes.

- There is need to disseminate information on techniques as well as outcomes of parent involvement programs.

- Comparisons are needed between different methods that attempt to enhance parental skills, especially between group and individual parent education approaches and between those programs that provide services and those that use parents as staff. In investigating these different methods, there is also a need to study the effects of using several parent education approaches simultaneously and sequentially.

- The effects of various staff variables on final program outcome and on the day by day process of program operation need investigation, such as differences between professional and paraprofessional staff, and between persons with different personality structures.

- Further attention is needed in regard to the feasibility and effects of having other family members, in addition to the mother, be taught to tutor young children in the family.

- The effects of various timing and duration variables need further investigation, such as age of child at program initiation, duration of intervention, age of child at program termination and frequency and length of individual intervention sessions.

- Greater attention should be given to developing methods that will permit controlled, valid assessment of program impact when improvements, and thus change, are introduced into the program operation.

- Expansion and refinement are needed in the assessment of program impact on parents and children. The following areas seem especially crucial:

    - Expansion of current efforts to assess children's cognitive development in broader terms than mere IQ.

    - Further development and usage of instruments to assess children's social-emotional development.

-Development and use of more systematic and structured instruments to assess parent attitudes or behavior in the home environment.

-Greater use of control groups that include middle and high income families in intervention studies involving low income families.

-Greater study of individual differences in relation to program impact so that impact will not be assessed only in terms of overall group scores.

-Long-term follow-up of program impact in regard to parent and home characteristics and children's social-emotional development, which would include assessment of various life circumstances and experiences of parents and children following the intervention.

-Attention to and reporting of possible negative effects of intervention.

-Study of the effects of intervention on siblings of target children and on families living near target families.

-Systematic, objective assessment of various parent education approaches used in intervention programs.

A Statement and Working Paper On Longitudinal/Intervention Research

Prepared by Edith Grotberg, Ph. D. and Ellen Searcy, M.A.

This report highlights advantages of, as well as problems peculiar to, longitudinal/intervention research and reviews initial efforts to look at this type of research on an interagency basis.

Note is made of the various practical problems involved in longitudinal/intervention research. These include its high cost; the shifting of goals and funds with changing Administrations; the fact that the Administration, Congress, and agency heads prefer immediate and tangible results from the investment of research dollars; the large turnover of program administrators and managers which interrupts research continuity; loss of interest over time by the investigators themselves; etc. Any or all of these practical factors may mean that a project is discontinued before yields are in, so that the usefulness of a particular study is not adequately demonstrated.

In discussing longitudinal research per se, it is noted that these studies are especially valuable since, by following the development of children over years, assessment can be made of behavioral changes over time. Such studies face a number of difficulties, however. In addition to the problem of continued stable funding, the longitudinal research design is often too limited and may even become outdated as new knowledge suggests desirable changes in design. Further, samples have generally been too small, too unrepresentative and subject to high attrition rates. Such studies also are subject to bias because of the effects of continued observation and testing (e.g., Observer effects, Hawthorne effects, increased awareness and ability to report on the part of the subjects, etc.). Continuity of staffing is another problem. Principal investigators often leave or do not live on to complete a project. Other staff also may change so that problems are raised about observer and/or tester differences. Too, subjects in longitudinal studies may be influenced by both national and local changes in the environment that may exert both measurable and unmeasurable influences. Observation and testing often present difficulties in that children may not be available for either at a specified time and/or measurements and evaluation instruments may be revised or exchanged for new ones. Thus, investigators are faced with dilemmas as to whether procedures should be fixed or flexible, whether initially used instruments should be exchanged for new and improved ones. After collecting a large mass of data, problems must be faced as to which data will be used in the final processing.

Intervention research provides the advantage of effecting change where the change agent or treatment is identifiable and controlled. It provides information that is helpful to enhancing child development, correcting defects in development or perhaps in preventing defects. Like longitudianl research, intervention studies also face a number of problems. One problem revolves around the interpretation of gains or losses on test performance which arise because of subjects' test motivation, test biases and regression phenomena. There are also methodological problems. These include sampling; determining the effects of differences in kinds of intervention and measurements used with different age groups; identifying factors that confound the determination of the effect of time in an intervention program; determining individual and group differences (especially since intervention studies tend to deal with group means); problems in measuring the effects of different types of intervention (e.g., structured versus less structured); evaluation difficulties arising from the tendency to focus on how much rather than what types of changes occur; and, the difficulties of assessing the effects of sources other than the interventions, such as family, physical and community settings (particularly since studies tend to focus only on intervention effects).

All the above problems of both longitudinal and intervention research exist in longitudinal/intervention research; however, the latter also gives rise to new and unique problems. It is noted, for example, that no one has looked at the "relative value of providing intervention programs on a continuous basis over time compared to determining at what times and in what forms intervention should occur." Although some data suggest the benefits and disadvantages of certain sequences and certain programs, the problems of population mobility and uncontrolled social and educational systems make it difficult to keep a child in the same intervention program over time or to determine the type of sequence most beneficial to him. The question of whether long-term intervention should be comprehensive or specific in nature is complicated by the problems of cost-benefit and determining the best type of intervention for different age groups in different populations.

It is also noted that there are no research strategies for determining the long-term latent effects of intervention. Further, there are problems in determining the predictors of recent performance to future performance, as well as in identifying the precursors to present performance. For longitudinal/intervention research to be meaningful, this type of information is needed. Another persistent problem is knowing how to explain (or to choose between various explanations) the measured losses or gains after intervention has terminated.

Despite all these problems peculiar to longitudinal/intervention research, the Interagency Panel believes that such research is imperative and that the problems must be resolved. In the remainder of this report, Panel members address themselves to many of these problems and suggest tentative research plans and procedures that might be used in developing possible interagency coordinated longitudinal/intervention research. Included in the report are summaries of the current longitudinal/intervention research emphases of representative agencies.

A Review of the Present Status And Future Needs in Day Care Research

Prepared by Judith Chapman, Ph.D. and Joyce Lazar, M.A.

This document reviews the studies and findings on the present status of day care research and identifies major issues needing research over the next two to five years. Findings are drawn from three levels of research relating to children: 1) child development research evidence about all children (including the present state of knowledge about medical, nutritional and safety needs of children, and physical, cognitive and social-emotional aspects of maturation and development); 2) research findings on particular groups of children (including studies of infants and young children, programs on early childhood intervention, and preschool education and services); and, 3) research conducted in the United States or in other countries dealing specifically with the day care situation.

In reviewing recent research on day care delivery systems, this report covers surveys of need, the availability and utilization of day care, assessments of quality day care and studies of costs of services and demonstration models. The findings of these research investigations are examined together with major issues needing further research. Because the recommendations of this report are quite extensive, only suggested areas for future research are presented here. These areas are as follows:

- The auspices providing the day care, including the source of care as well as the type of care (e.g., center based, family day care, and informal arrangements).

- The staffing of day care services and related issues, including the qualifications and characteristics of day care staff, their selection and training, staff-child ratios, staff composition and staff supervision and turnover.
- The facilities of day care centers and programs, including issues relating to the size of the center, the size of groups, space per child, the organization of space and equipment and the issue of privacy.
- The children in day care, including questions of the impact on children of separation from the mother and of day care in general, stability or mobility of children within the day care situation, children's group dynamics, age mix, socioeconomic and ethnic mix and children with special problems or characteristics.
- The relationship of parents to the day care program, including parent participation, communication with parents, impact of day care upon immediate family members and the extended family.
- Children's curriculum and activities in the day care center or other caretaking operation.
- The support services provided by comprehensive day care programs, including physical and mental health services, nutrition and social services.
- Methodological findings and questions for future day care research.

In addition to the above, the report discusses a number of recommended research strategies and places them into an organized hierarchy of priorities. These priorities are organized under five broad research categories: (1) programmatic; (2) evaluative; (3) basic; (4) methodological; and, (5) disseminative.

Recommendations on programmatic research issues include needs and issues in center and satellite day care, family day care and informal and extended day care. Some programmatic research needs common to all these types of day care revolve around the collection of data on the characteristics of the children being served, the caretakers and the programmatic arrangements themselves; the type of curriculum best suited to the needs of the children cared for in the various day care arrangements; and, the impact upon children of the various types of day care.

Recommendations for evaluative research (i.e., research which compares the effectiveness of programs against their own as well as nationally established goals) are divided into three major evaluation strategies: formative, summative and planned variations. Recommendations for formative evaluation center around assessment of how well the program is meeting its own goals and include suggestions for research in the areas of program auspices, staff, facilities, curricula, support services and program impact upon children and their families. Recommendations for summative evaluation include a number of strategies for data gathering and assessment of programs in terms of national standards and goals for day care.

Recommendations for basic research in day care include the study of many variables already mentioned (e.g., physical facilities, staff, program impact on children, etc.), as well as strategies for conducting research that will provide new information on the "whole child," "the life space of the child" and longitudinal aspects of child development.

Recommendations concerning methodological issues cover essentially the same areas of concern as those mentioned under basic research. However, the emphasis in the methodological realm is upon ways of identifying problems, formulating hypotheses, gathering data, developing measurement instruments and analyzing research findings. Several methodological questions are raised, such as: "What research designs and methodologies can include all of the factors impinging on the child to determine sources of impact on his development?"; "How is it possible to have interdisciplinary research designs and methodologies developed?"; "How can parents and other affected groups be involved in research designs and methodologies?", etc.

Finally, recommendations on dissemination include the development of systems appropriate to local communities that will permit them to match available day care vacancies in center and family day care homes with parents who are seeking these services; comparisons between various approaches for disseminating information about day care models; ways of making existing information available in useful forms for paraprofessionals; ways of gathering new information for dissemination; and, the further development of strategies to communicate basic and applied research information to other researchers.

Research Problems and Issues in the Area of Socialization

Prepared by Barbara Sowder, M.A. and Joyce Lazar, M.A.

This document consists of two state-of-the-arts papers which deal with different areas of socialization. The first report is concerned with socialization determinants in the development and modification of intergroup and intragroup attitudes and behaviors. The second paper reviews the relationship between various kinds of economic support for families and the development of attitudes creating dependency or independence and asocial behavior and responsibility among children.

The report on intergroup and intragroup attitudes and behaviors includes such problems as the development of ethnic and social class awareness, self-identification and preference in very young children, and ethnic cleavage, self-concept, stereotypical thinking and attitudinal-behavioral inconsistencies in school children, youth and adults. The discussion of the determinants of inter- and intra-group attitudes and behaviors covers a wide range of environmental and interpersonal variables: the family; the school; socioeconomic status; status mobility, competition, frustration and aggression; cooperation and friendship; group and cultural norms and values; belief congruence and other cognitive factors; and personality. The problem of changing intergroup and intragroup attitudes and behaviors is discussed from several perspectives: contact and change within recreational, residential, occupational and school settings; changes in group membership; and propaganda, informational and educational approaches to attitudinal change. Some of the recommended areas of research are presented below.

- Re-examination of the issue of whether or not prejudice is entirely learned or partly based on some innate human tendency.
- Study of the age at which intervention might best be introduced to influence the learning of positive attitudes toward one's self and others.
- Development of methods to determine whether or not infants and toddlers are aware of ethnic and social class differences and, if so, what consequences such awareness has for child development and for the achievement of a successful ethnic and social class mix in institutions caring for very young children.
- Research to determine whether or not the majority of young black children today have a better self and group image than did their peers in the past.
- Systematic study of the differences in self-concept noted between older and younger minority group children to determine whether the differences are a function of age or of differences in methodology.
- Longitudinal studies of the development of children's attitudes toward themselves and others which include the relationship between developmental processes and those environmental influences thought to be related to the formation of ethnic and social class attitudes and behaviors.
- Research on conformity behavior in the group situation, including clarification of when conformity behavior is and is not damaging to child development and to the achievement of harmonious group relations.
- Various types of studies on the effects of competition on child development and on the role which competition may play in hindering a successful ethnic and social class mix in our various child care institutions.
- Determination of the conditions under which cooperative group behavior leads to greater inter- and intra-group friendship.
- Clarification of the effects of group composition upon group behavior, e.g., the proportion of majority versus minority group children, and the proportion of age and sex groups, required to promote desirable group behavior.

- Clarification of the relationship between ethnic and social class prejudice and child rearing practices among all types of American families.
- Controlled research to determine all the school and classroom variables that promote harmonious relations between children of different ethnic and social class groups within the school environment. Such research should include the impact of the home and community upon the school environment.
- Pilot projects to determine whether or not teaching an appreciation of the contribution which different occupational groups make to our society would improve the inter- and intra-group attitudes and behaviors of young children.
- Research designed to tap the strengths as well as the weaknesses of minority and economically disadvantaged groups.
- Delineation of the different types of personalities that exist among our various ethnic and social class groups, and of the types of intervention that will bring about positive attitudinal and behavioral changes in individuals with different cognitive styles and personality structures.
- Research to determine the variables related to attitudinal-behavioral inconsistency.
- Systematic, longitudinal research to determine the impact of desegregation and integration upon child development (including children's inter- and intra-group attitudes and behaviors), and the conditions under which successful desegregation and integration occur in various settings.
- Research to determine why some communications designed to combat ethnic prejudice are more successful than others. Such studies should include a systematic determination of the effects of different social studies curriculum upon children's inter- and intra-group attitudes and behaviors.

The report on income support for families reviews several existing support mechanisms (e.g., Social Security, Unemployment Compensation, Aid to Families with Dependent Children, job training programs, income maintenance experiments, etc.) and the attitudes of the recipients and the larger society toward these mechanisms. Other areas explored include: the family's access to, eligibility for and utilization of the various income mechanisms; work attitudes and barriers to employment; positive and negative consequences of the various income support programs on the economic status of the family, marital stability and status, fertility and functioning of the family, self-esteem, morale, degree of alienation or powerlessness and parents' attitudes toward dependency; and the direct and indirect consequences of the support systems upon the behavior of children. The issues, needs and gaps in the existing research related to each of these areas are identified. Some of the recommended areas of research are presented below:

- Research on the attitudes of society and the recipients concerning the various types of income support.
- Studies which control for the amount of income and compare the behavioral outcomes among children of families receiving the various types of income support.
- Identification of the characteristics of individuals who express the desire to work, have the necessary attributes to find employment and to profit from the provision of societal supports that will enable them to work as well as identification of the characteristics of individuals for whom eventual employment is not a viable alternative to public sources of income support.
- Studies to determine if there are differential impacts on children's perceptions of parents, adult roles and work and dependency under varying conditions, e.g., when parents express a desire to work but cannot find employment; when parents combine welfare with supplementary earnings through employment; when parents receive supplemental income through work incentive or income maintenance experiments; when parents are able to leave welfare rolls and become self-supporting but remain below the poverty level; and, when parents become self-supporting and earn incomes above the poverty level.

- Determination of the long-range effects of the various forms of income support.

- Large scale, long-term studies to measure the impact of various sources of income support on fertility rates, as well as the effect of family size on marital stability, family functioning and children's behavior.

- Research on the impact of various forms of income support on the recipients' self-esteem, self-concept, degree of alienation and powerlessness and sense of dependency.

- Systematic follow-up of the impact of work training programs upon the participants' self-concept and self-esteem as well as later employment behavior.

- Research on the direct, indirect and mediated impacts of the various forms of income support on children's behavior. Such studies need to include children's motivational, achievement and aggressive behavior, their sense of alienation versus their sense of involvement and their feelings of dependency versus their sense of autonomy. In addition, studies should focus on parental characteristics, such as those that determine the quality of the affective relationship with the child, the clarity and severity of disciplinary methods, the parents' feelings of regard for self and child, the pressures parents exert upon the child for independence and their expectations regarding the child's achievement.

Appendix B

Table 10

Changes in Research Effort for Agencies for FY '73 Revised Plans Using FY '72 as Basis for Comparison

+ = increased effort
L = decreased effort
* = same amount of effort
0 = no activity

I. The Developmental Process

A. The Development of Cognitive Ability	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE[*]	OEO	NINDS	USDA
1. Generalization of knowledge and skills and application to new situations	*	*	*	0	0	+		0	0	*
2. Resolve discrepancies between theories of cognitive development	*	*	*	0	0	+		0	0	*
3. Cognitive skills development in infancy	*	+	*	0	0	+		L	*	*
4. Curriculum for cognitive skills development	*	0	*	0	0	*		*	0	0
5. Physiological underpinnings of cognitive development	0	+	*	0	0	0		0	0	0
6. Nature of learning styles	0	*	*	0	0	+		*	0	*
7. Reading and ethnic differences	*	0	*	0	0	*		*	*	0

[*] Over 75% of the FY '73 plans consist of activities initiated by OE, and reflect the emphases of OE.

I. The Developmental Process, cont'd.

B. Social and Emotional Development	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
1. When children become attached to others, to whom and how intensely	0	*	*	0	*	*		L	0	*
2. How children's imitation and play affect the formation of self-image and social identity	0	*	+	*	0	0		L	0	*
3. How cultural and subcultural variations within our own country affect differences in children; their effect on adjustment to the dominant culture	0	*	*	0	*	0		L	0	*
4. Natural development of children's moral and ethical behavior	+	*	+	0	0	L		0	0	*
5. Motivation	*	*	+	0	+	+		L	0	*
6. Intervention strategies for infants	L	0	+	*	0	+		*	0	*
7. Social and educational effects of busing	0	0	0	0	0	0		0	0	0
8. Development and prevention of racism	*	*	*	0	0	0		0	0	0
9. Detection and treatment of mental illness	*	0	+	*	0	+		0	0	*

I. The Developmental Process, cont'd.

C. Physical Development	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
1. Genetic and maternal-environmental events affecting fetal development	L	+	*	+	0	0		0	*	0
2. Causes of premature birth and birth defects; infant mortality	0	+	0	+	0	0		0	*	0
3. Effects of maternal and child nutrition on pre- and post-natal child development	*	+	L	+	0	0		*	*	*
4. Studies associating childhood diseases with the child's own life space	0	0	*	0	0	0		0	*	0
5. Effect of maternal drug abuse on newborn children	0	+	+	+	0	0		0	*	0
6. Physical education and recreation for handicapped children	0	0	*	*	0	*		0	0	0

II. Effect of Primary Environmental Influences

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Effect of urban, suburban or rural life on the young child	*	+	0	0	0	0		+	0	*
B. Specification of what ghetto and slum living means to children's physical and mental development	*	*	*	*	*	0		*	*	*
C. How global environmental variables are mediated to the child through more proximal agents	*	*	+	0	*	0		*	0	0
D. How family characteristics (e.g., size, stability, cultural values) affect child development	+	+	+	*	+	0		0	*	*
E. Changing role of the family in U.S. society and its effects on children	*	*	+	0	0	0		0	0	*
F. Impact on children of the formal learning situation of the schools compared with learning at home.	L	0	*	0	0	+		+	0	0
G. Interventions for promoting stable family life	+	0	*	0	+	0		0	0	*
H. Individualized and diagnostic instruction	0	0	*	0	0	+		*	0	0
I. Long-term demonstration of individualization principles with high probability of successfully raising achievement scores	*	*	+	0	0	+		*	0	0

III. The Effect of Community and Broader Social Programs

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Impact of day care experiences--for better or worse--on child development	+	0	+	+	0	+		+	0	+
B. How various amounts of separation from home affect children of different ages	0	*	0	0	0	L		+	0	0
C. Effects of parent involvement on day care and preschool education	+	0	+	0	*	+		+	0	+
D. Training needs for day care staff	+	0	+	+	L	+		+	0	+
E. Long-range effects of various day care and preschool program characteristics	+	0	+	0	0	+		+	0	0
F. Impact of day care health services	+	0	+	+	0	+		0	0	0
G. Impact of maternal and child health programs	0	0	*	+	0	+		0	*	*
H. Impact of programs for handicapped and mentally retarded children	0	*	*	*	0	+		0	0	0
I. Innovation in the delivery of nutritional and health care	+	0	0	+	0	+		0	0	+

III. The Effect of Community and Broader Social Programs, cont'd.

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
J. Coordination of medical services	+	0	*	+	0	+		*	0	0
K. Studies of effective program elements in Head Start, Follow Through, compensatory education programs	*	0	*	0	0	*		+	0	*
L. Training methods which will make effective skills available to early childhood teachers	+	0	*	0	0	+		*	0	0
M. Training methods which will make effective child-rearing and instructional skills available to parents	+	0	*	0	0	+		*	0	+
N. Follow-up programs for studies of earlier preschool programs	+	0	+	0	0	*		0	0	0
O. Alternatives to day care and compensatory education programs										0
1. Parents as teachers	+	0	*	0	0	+		+	0	+
2. Older children as teachers	+	0	0	0	0	+		0	0	+

III. The Effect of Community and Broader Social Programs, cont'd.

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
3. Training teens for parenthood	+	0	*	0	0	0		*	0	+
4. Combination of home and day care centers	+	0	*	0	0	+		+	0	+
5. Effects of parental income maintenance on children	0	0	0	0	*	0		+	*	0
6. Impact of employment programs for parents on child development	0	0	0	0	+	0		+	0	0
P. Effects on children of housing programs	0	*	0	0	0	0		+	0	0
Q. Effects on children of basic changes other than above in living conditions	0	*	*	0	*	0		+	0	0
R. Effects and effectiveness of television as a medium of instruction	*	0	*	0	0	+		0	0	*
S. Child advocacy programs	*	0	+	0	+	+		0	0	*

IV. The Global Approach and Combined and Comparative Effects

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Whole child, i.e., the child as a total entity	0	+	+	+	*	+		L	*	0
B. Total life space; ecological studies	+	+	+	0	L	L		L	0	*
C. Comprehensive programs or settings (effects of combinations of elements in primary environment)	+	0	+	0	+	+		*	0	*
1. Comprehensive, validated child care and education models for infants	*	0	+	0	0	+		*	0	+
2. Comprehensive, validated child care and education models for toddlers	*	0	+	0	0	+		*	0	+
3. Comprehensive, validated child care and education models for preschool-age children	*	0	+	0	L	+		*	0	+
4. Comprehensive, validated child care and education models for elementary school-age children	*	0	+	0	0	+		0	0	+
D. Combined and/or comparative effects of social programs	0	0	+	0	+	0		*	0	*

V. Research to Benefit all Children

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. What is a fair distribution of funds for child development and child development research across socio-economic levels and cultural backgrounds	0	0	0	0	0	0		*	0	0
B. What works in education and family care for middle class children	0	0	0	0	0	*		0	0	*
C. What works in education and family care for the bright and able (gifted) child	0	0	0	0	0	*		0	0	0
D. Which different combinations of programs will benefit children with different backgrounds and home environments	+	0	0	0	0	+		+	0	*
E. Negative consequences for minority children of the manner in which special services are delivered	0	0	0	0	+	*		*	0	*
F. Measures of adaptive behavior which take into consideration the unique life style and culture of different ethnic and social groups	+	*	*	0	*	*		*	0	*
G. Curricula for specific kinds of various ethnic groups	*	0	0	0	0	*		0	0	0

VI. Research on Methodology

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Program evaluation procedures for analyzing complex situations containing many variables	*	0	+	*	+	*		*	0	*
B. Program evaluation methods which measure the relation of specific inputs to performance	*	0	+	+	0	+		+	0	*
C. Systems to insure that the criteria used to measure success are relevant to program characteristics	*	0	*	*	+	+		*	0	*
D. The refinement and development of techniques of carrying out behavioral observations in natural ongoing situations	+	0	+	0	0	+		*	0	*
E. Methodology of longitudinal research	*	*	+	*	0	+		0	*	0
F. Improving measures of young children and infants	+	*	*	*	0	*		*	*	+

VII. Study of Research Planning and Dissemination

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Conferences or studies relating to Federal research goals	+	*	+	+	+	+		L	0	+
B. Studies of goals for child development	0	*	+	0	0	*		L	0	+
C. Studies of diffusion, dissemination and utilization of research results	+	*	+	+	+	*		L	0	+

Appendix C

Table 11

Changes in Research Effort for Agencies for FY '74-'78 Forward Planning Using FY '73 as Basis for Comparison

+ = increased effort
L = decreased effort
* = same amount of effort
0 = no activity

I. The Developmental Process

A. The Development of Cognitive Ability	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
1. Generalization of knowledge and skills and application to new situations	*	*	*	0	0	+	0	0	0	+
2. Resolve discrepancies between theories of cognitive development	*	*	*	0	0	+	0	0	0	0
3. Cognitive skills development in infancy	L	+	*	+	+	+	0	+	*	+
4. Curriculum for cognitive skills development	0	0	*	+	0	*	+	*	0	0
5. Physiological underpinnings of cognitive development	0	+	*	*	0	0	0	0	0	0
6. Nature of learning styles	0	*	*	0	0	+	+	*	0	+
7. Reading and ethnic differences	0	0	*	0	0	*	0	*	*	+

I. The Developmental Process, cont'd.

B. Social and Emotional Development	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
1. When children become attached to others, to whom and how intensely	*	*	*	0	+	*	0	+	0	*
2. How children's imitation and play affect the formation of self-image and social identity	+	*	*	*	0	0	0	+	0	+
3. How cultural and subcultural variations within our own country affect differences in children; their effect on adjustment to the dominant culture	0	*	*	0	*	0	+	+	0	+
4. Natural development of children's moral and ethical behavior	*	*	*	0	L	0	+	+	0	+
5. Motivation	*	*	*	+	+	+	+	+	0	+
6. Intervention strategies for infants	0	0	*	*	+	+	0	+	0	+
7. Social and educational effects of busing	0	0	0	0	0	0	0	0	0	0
8. Development and prevention of racism	*	*	*	0	0	0	0	0	0	0
9. Detection and treatment of mental illness	0	0	*	*	0	+	0	0	0	+

I. The Developmental Process, cont'd.

C. Physical Development	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
1. Genetic and maternal-environmental events affecting fetal development	0	+	*	+	0	0	0	0	*	0
2. Causes of premature birth and birth defects; infant mortality	0	+	0	+	0	0	0	0	*	0
3. Effects of maternal and child nutrition on pre- and post-natal child development	*	+	*	+	0	0	0	0	*	+
4. Studies associating childhood diseases with the child's own life space	0	0	*	0	0	0	0	0	*	+
5. Effect of maternal drug abuse on newborn children	0	+	+	+	0	0	0	0	*	+
6. Physical education and recreation for handicapped children	0	0	*	*	0	*	0	0	0	0
7. Institutional barriers to service acceptability**				+						

**MCHS has added this area of focus for increased attention.

II. Effect of Primary Environmental Influences

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Effect of urban, suburban or rural life on the young child	0	+	+	0	0	0	+	+	0	+
B. Specification of what ghetto and slum living means to children's physical and mental development	0	*	*	*	*	0	+	+	*	+
C. How global environmental variables are mediated to the child through more proximal agents	*	*	*	0	*	0	+	+	0	0
D. How family characteristics (e.g., size, stability, cultural values) affect child development	+	+	+	*	+	0	+	+	*	+
E. Changing role of the family in U.S. society and its effects on children	+	*	+	0	+	0	0	0	0	+
F. Impact on children of the formal learning situation of the schools compared with learning at home	0	0	*	0	0	+	+	+	0	0
G. Interventions for promoting stable family life	+	0	*	0	+	0	0	0	0	+
H. Individualized and diagnostic instruction	0	0	*	0	0	+	+	*	0	0
I. Long-term demonstration of individualization principles with high probability of successfully raising achievement scores	*	*	*	0	0	+	+	*	0	0
J. Provision of health care in school setting**				+						

**MCHS had added this area of focus for increased attention.

III. The Effect of Community and Broader Social Programs

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Impact of day care experiences--for better or worse--on child development	+	0	+	+	+	+	0	+	0	+
B. How various amounts of separation from home affect children of different ages	+	*	0	+	0	L	0	+	0	0
C. Effects of parent involvement on day care and preschool education	*	0	+	0	*	+	+	+	0	+
D. Training needs for day care staff	+	0	+	+	0	+	+	+	0	+
E. Long-range effects of various day care and preschool program characteristics	+	0	+	0	+	+	+	+	0	+
F. Impact of day care health services	*	0	+	+	0	+	0	0	0	+
G. Impact of maternal and child health programs	0	0	*	+	0	+	0	0	*	+
H. Impact of programs for handicapped and mentally retarded children	+	*	+	*	+	+	+	0	0	+
I. Innovation in the delivery of nutritional and health care	*	0	0	+	0	+	0	0	0	+

III. The Effect of Community and Broader Social Programs, cont'd.

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
J. Coordination of medical services	*	0	*	+	0	+	0	*	0	0
K. Studies of effective program elements in Head Start, Follow Through, compensatory education programs	*	0	*	0	+	*	+	+	0	*
L. Training methods which will make effective skills available to early childhood teachers	*	0	*	0	0	+	+	+	0	0
M. Training methods which will make effective child-rearing and instructional skills available to parents	*	0	*	0	0	+	+	+	0	+
N. Follow-up programs for studies of earlier preschool programs	*	0	*	0	0	*	+	0	0	+
O. Alternatives to day care and compensatory education programs	0	0	*	0	0	0	+	0	0	+
1. Parents as teachers	*	0	*	0	+	+	+	+	0	+
2. Older children as teachers	*	0	0	0	0	+	+	0	0	+

III. The Effect of Community and Broader Social Programs, cont'd.

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE[*]	OEO	NINDS	USDA
3. Training teens for parenthood	*	0	*	0[**]	+	0	+	*	0	+
4. Combination of home and day care centers	*	0	*	0	0	+	+	+	0	+
5. Effects of parental income maintenance on children	0	0	0	0	*	0	0	+	*	+
6. Impact of employment programs for parents on child development	0	0	0	0	+	0	0	+	0	+
P. Effects on children of housing programs	0	*	0	0	0	0	0	+	0	+
Q. Effects on children of basic changes other than above in living conditions	0	*	*	0	*	0	0	+	0	0
R. Effects and effectiveness of television as a medium of instruction	*	0	*	0	0	+	0	0	0	+
S. Child advocacy programs	*	0	*	0	0	+	0	0	0	+

[**] MCHS is training teams as health aides and advocates with increased effort.

IV. The Global Approach and Combined and Comparative Effects

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Whole child, i.e., the child as a total entity	0	+	+	+	*	+	+	+	*	+
B. Total life space; ecological studies	+	+	+	0	0	+	+	+	0	+
C. Comprehensive programs or settings (effects of combinations of elements in primary environment)	*	0	+	0	L	+	+	+	0	+
1. Comprehensive, validated child care and education models for infants	*	0	*	0	0	+	0	+	0	+
2. Comprehensive, validated child care and education models for toddlers	*	0	*	0	0	+	0	+	0	+
3. Comprehensive, validated child care and education models for preschool-age children	*	0	*	0	L	+	+	+	0	+
4. Comprehensive, validated child care and education models for elementary school-age children	*	0	*	0	0	+	+	0	0	+
D. Combined and/or comparative effects of social programs	0	0	*	0	+	*	+	+	0	+

V. Research to Benefit all Children

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. What is a fair distribution of funds for child development and child development research across socio-economic levels and cultural backgrounds	0	0	0	0	0	0	+	0	0	0
B. What works in education and family care for middle class children	0	0	0	0	0	*	0	0	0	*
C. What works in education and family care for the bright and able (gifted) child	0	0	0	0	0	*	0	0	0	*
D. Which different combinations of programs will benefit children with different backgrounds and home environments	*	0	+	0	0	+	+	+	0	+
E. Negative consequences for minority children of the manner in which special services are delivered	0	0	+	0	+	*	+	*	0	*
F. Measures of adaptive behavior which take into consideration the unique life style and culture of different ethnic and social groups	+	*	*	+	*	*	+	*	0	+
G. Curricula for specific kinds of various ethnic groups	*	0	0	0	0	*	+	+	0	0

VI. Research on Methodology

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Program evaluation procedures for analyzing complex situations containing many variables	*	0	*	*	+	*	+	+	0	*
B. Program evaluation methods which measure the relation of specific inputs to performance	*	0	*	*	+	+	+	+	0	+
C. Systems to insure that the criteria used to measure success are relevant to program characteristics	*	0	*	*	+	+	+	+	0	+
D. The refinement and development of techniques of carrying out behavioral observations in natural ongoing situations	*	0	+	0	0	+	+	+	0	+
E. Methodology of longitudinal research	*	*	+	*	+	+	+	+	*	+
F. Improving measures of young children and infants	*	*	*	*	0	*	+	+	*	+

VII. Study of Research Planning and Dissemination

	OCD	NICHD	NIMH	MCHS	SRS	OE	NIE*	OEO	NINDS	USDA
A. Conferences or studies relating to Federal research goals	*	*	+	+	+	+	+	0	0	+
B. Studies of goals for child development	+	*	+	0	0	*	+	+	0	+
C. Studies of diffusion, dissemination and utilization of research results	+	*	+	+	+	+	+	+	0	+

Appendix D

Listing of all FY '72 Documents of the Interagency Panel

DOCUMENTS PREPARED FOR THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

By Social Research Group,
The George Washington University, Washington, D.C.

Toward Interagency Coordination: An Overview of Federal Research and Development Activities Relating to Early Childhood and Recommendations for the Future, and Executive Summary. Stearns, Searcy and Rosenfeld. October, 1971.

The History and Current Status of Federal Legislation Pertaining to Day Care Programs. Searcy and Ouellet, November, 1971.

A Review of the Present Status and Future Needs in Day Care Research. Chapman and Lazar, November, 1971.

Legislative Mandates for Early Childhood Research. Searcy and Ouellet, December, 1971.

Broad Agency Goals and Agency Research Objectives for FY 72. Searcy, December, 1971.

An Analysis of the Process of Establishing and Utilizing Research Priorities in Federally Funded Early Childhood Research and Development. Lazar, December, 1971.

The Status of Research in Children's Television. Searcy and Chapman, January, 1972.

The Present Status and Future Needs in Longitudinal Studies in Early Childhood Research and Development. Lazar, January, 1972.

Listing of Where to Send Grant, Project or Program Proposals. Searcy, January, 1972.

Listing of Research Issues for Panel Consideration. Lazar, January, 1972.

Early Childhood Research and Development Needs, Gaps, and Imbalances: Overview. Chapman, February, 1972.

Early Childhood Research and Development Needs and Gaps in Federally Funded Intervention Studies within a Longitudinal Framework. Lazar and Chapman, March, 1972.

Informal Agency Contacts for Grant, Project, or Program Information. Ouellet, March, 1972.

A Review of the Present Status and Future Research Needs of Programs to Develop Parenting Skills. Lazar and Chapman, April, 1972.

A Statement and Working Paper on Longitudinal/Intervention Research. Grotberg and Searcy, April, 1972.

Research Problems and Issues in the Area of Socialization. Sowder and Lazar, September, 1972.

Classification for Early Childhood Research and Development. A Working Draft. Searcy, September, 1972.

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Chapman, Judith E. Early Childhood Research and Development Needs, Gaps, and Imbalances: Overview. Washington, D.C.: The George Washington University, Social Research Group, 1972.

Chapman, Judith E. and Lazar, Joyce B. A Review of the Present Status and Future Needs in Day Care Research. Washington, D.C.: The George Washington University, Social Research Group, 1971.

Grotberg, Edith H. and Searcy, Ellen O. A Statement and Working Paper on Longitudinal/Intervention Research. Washington, D.C.: The George Washington University, Social Research Group, 1972.

Lazar, Joyce B. The Present Status and Future Needs in Longitudinal Studies in Early Childhood Research and Development. Washington, D.C.: The George Washington University, Social Research Group, 1972.

Lazar, Joyce B. and Chapman, Judith E. A Review of the Present Status and Future Research Needs of Programs to Develop Parenting Skills. Washington, D.C.: The George Washington University, Social Research Group, 1972.

Searcy, Ellen O. and Chapman, Judith E. The Status of Research in Children's Television. Washington, D.C.: The George Washington University, Social Research Group, 1972.

Sowder, Barbara J. and Lazar, Joyce B. Research Problems and Issues in the Area of Socialization. Washington, D.C.: The George Washington University, Social Research Group, 1972.

Stearns, M.S., Searcy, E.O. and Rosenfeld, A.H. Toward Interagency Coordination: An Overview of Federal Research and Development Activities Relating to Early Childhood and Recommendations for the Future. Washington, D.C.: The George Washington University, Social Research Group, 1971.

Stearns, M.S., Searcy, E.O. and Rosenfeld, A.H. Toward Interagency Coordination: Executive Summary. Washington, D.C.: The George Washington University, Social Research Group, 1971.